CyberData

VoIP Ceiling Speaker and Cisco Call Manager Server Setup Guide

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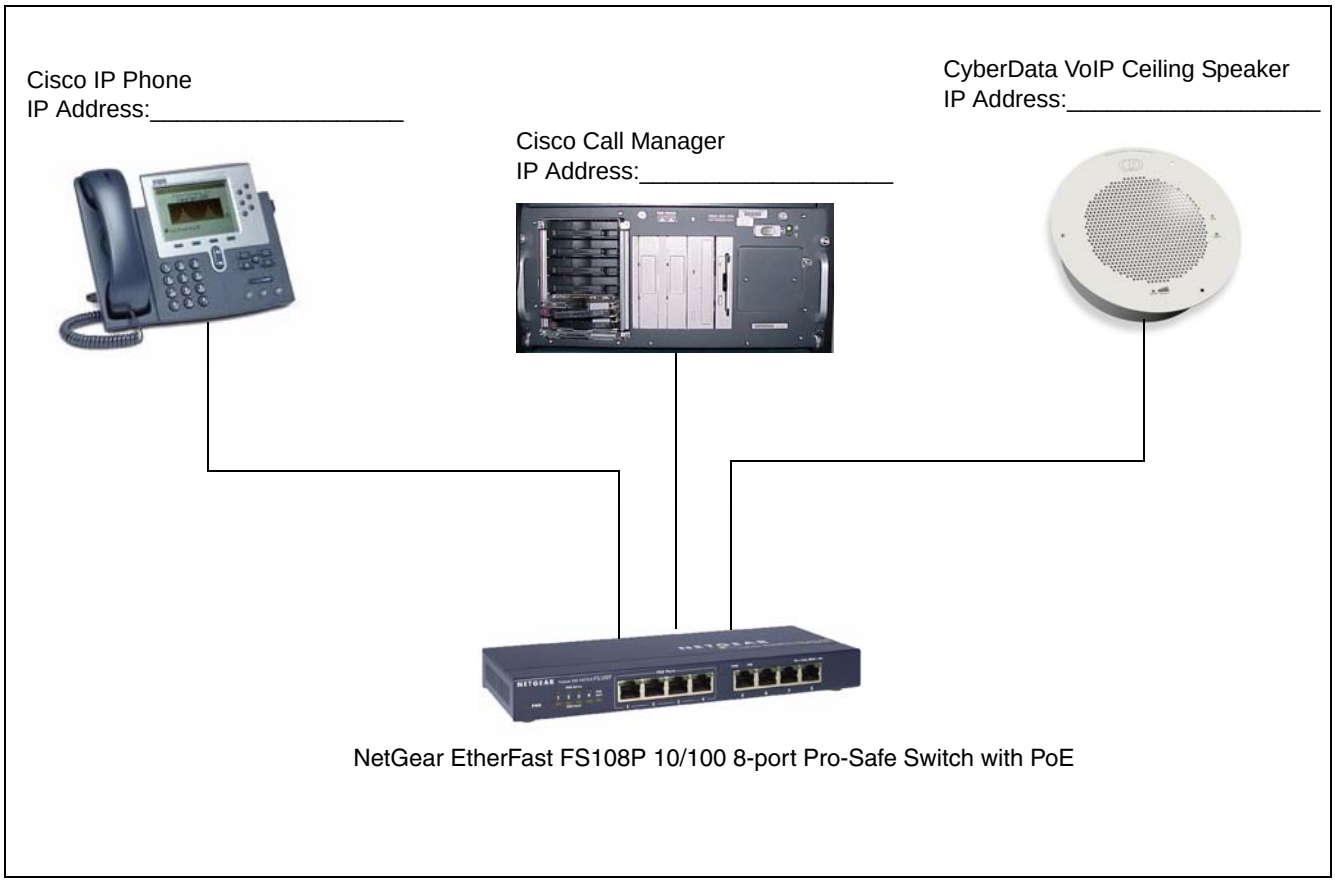
1.0 Setup Diagram

Figure 1-1 is a setup diagram for a single VoIP speaker configuration. In this configuration, the ceiling speaker acts as a standalone SIP telephony device.

Figure 1-1. Setup Diagram



2.0 Host PC Environment

Table 2-1. Host PC Environment Details

	Description
Hardware Type	
Hardware Version	
Software Type	Cisco Call Manager
Software Version	System Version 7.0.1.11000-2

3.0 Test Setup Equipment

Table 3-1. Test Setup Equipment

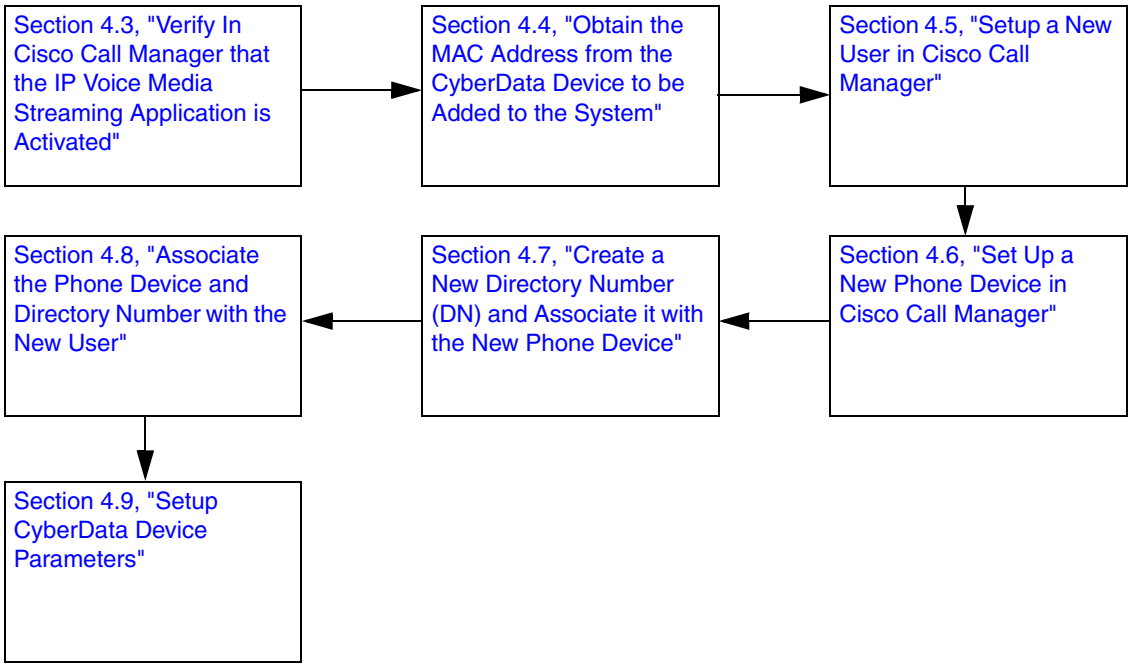
Equipment	Model	Version
Cisco IP Phone	7940	
Notes:		
CyberData VoIP Ceiling Speaker	010844D	4.01
Notes:		
Linksys EtherFast 10/100 8-port Workgroup Hub	N/A	N/A
Notes:		
Notes:		
Notes:		
Notes:		
Notes:		
Notes:		
Notes:		

4.0 Setup Procedure

4.1 Setup Procedure Overview

- Section 4.3, "Verify In Cisco Call Manager that the IP Voice Media Streaming Application is Activated"
- Section 4.4, "Obtain the MAC Address from the CyberData Device to be Added to the System"
- Section 4.5, "Setup a New User in Cisco Call Manager"
- Section 4.6, "Set Up a New Phone Device in Cisco Call Manager"
- Section 4.7, "Create a New Directory Number (DN) and Associate it with the New Phone Device"
- Section 4.8, "Associate the Phone Device and Directory Number with the New User"
- Section 4.9, "Setup CyberData Device Parameters"

4.2 Setup Procedure Overview Diagram

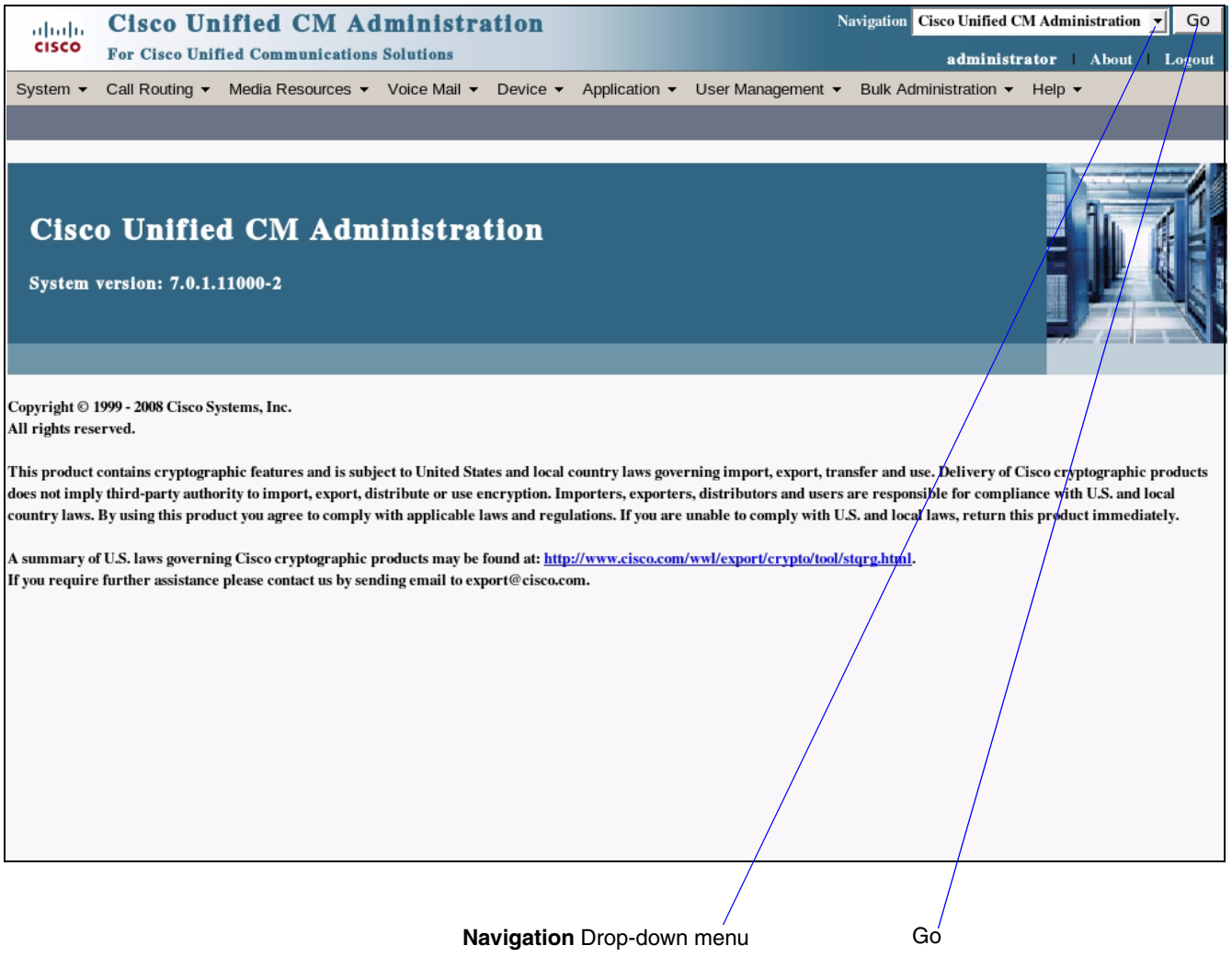

Section 4.3, "Verify In Cisco Call Manager that the IP Voice Media Streaming Application is Activated"
Section 4.4, "Obtain the MAC Address from the CyberData Device to be Added to the System"
Section 4.5, "Setup a New User in Cisco Call Manager"
Section 4.6, "Set Up a New Phone Device in Cisco Call Manager"
Section 4.7, "Create a New Directory Number (DN) and Associate it with the New Phone Device"
Section 4.8, "Associate the Phone Device and Directory Number with the New User"
Section 4.9, "Setup CyberData Device Parameters"

4.3 Verify In Cisco Call Manager that the IP Voice Media Streaming Application is Activated

To verify In Cisco Call Manager that the IP Voice Media Streaming Application is activated,

1. Log in to Cisco Call Manager and you will see the screen in Figure 4-2.
2. Click on the **Navigation** drop-down menu and select **Cisco Unified Serviceability**.
3. Click on the **Go** button.

Figure 4-2. Main Page


Cisco Unified CM Administration
For Cisco Unified Communications Solutions
Navigation
Cisco Unified CM Administration
Go
administrator | About | Logout
System
Call Routing
Media Resources
Voice Mail
Device
Application
User Management
Bulk Administration
Help
Cisco Unified CM Administration
System version: 7.0.1.11000-2
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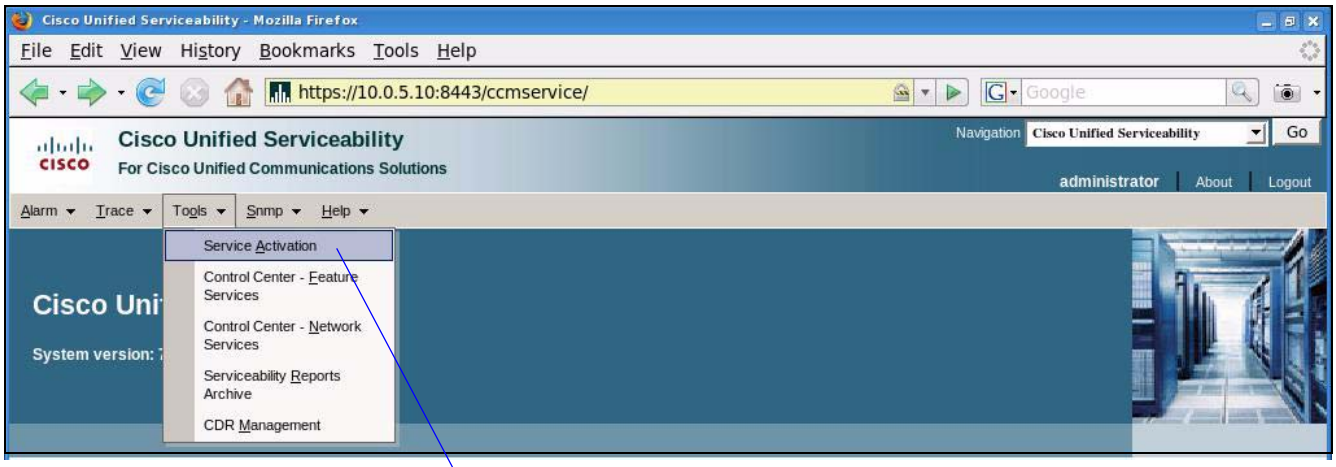
All rights reserved.
This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.
A summary of U.S. laws governing Cisco cryptographic products may be found at: http://www.cisco.com/wwl/export/crypto/tool/stqrg.html.
If you require further assistance please contact us by sending email to export@cisco.com.
Navigation Drop-down menu
Go

4. On the **Cisco Unified Serviceability** page, select the **Tools** menu and select **Service Activation.**

Figure 4-3. Cisco Unified Serviceability Page



Tools menu (select **Service Activation**)

5. Scroll down and see if the **Activation Status** of the **Cisco IP Voice Media Streaming App** is **Activated**. If the **Activation Status** does not display the word **Activated**, then click on the checkbox next to the **Cisco IP Voice Media Streaming App** service name to activate it.

Figure 4-4. Cisco IP Voice Media Streaming App

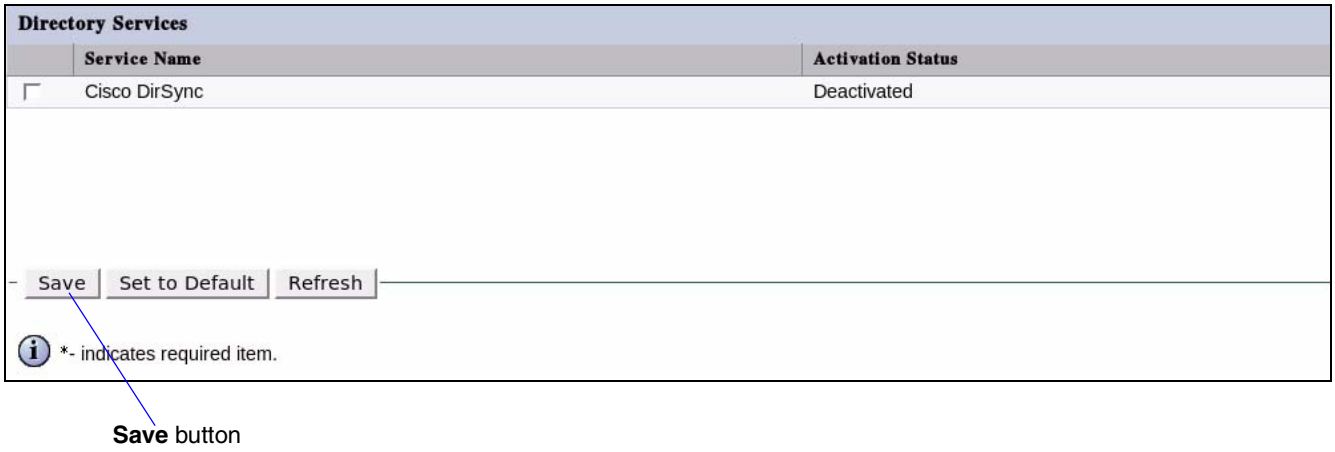
CM Services

	Service Name	Activation Status
☑	Cisco CallManager	Activated
☑	Cisco Tftp	Activated
☐	Cisco Messaging Interface	Deactivated
☐	Cisco Unified Mobile Voice Access Service	Deactivated
☑	Cisco IP Voice Media Streaming App	Activated
☑	Cisco CTIManager	Activated
☐	Cisco Extension Mobility	Deactivated
☐	Cisco Extended Functions	Deactivated
☐	Cisco Dialed Number Analyzer	Deactivated
☐	Cisco DHCP Monitor Service	Deactivated

Cisco IP Voice Media Streaming App

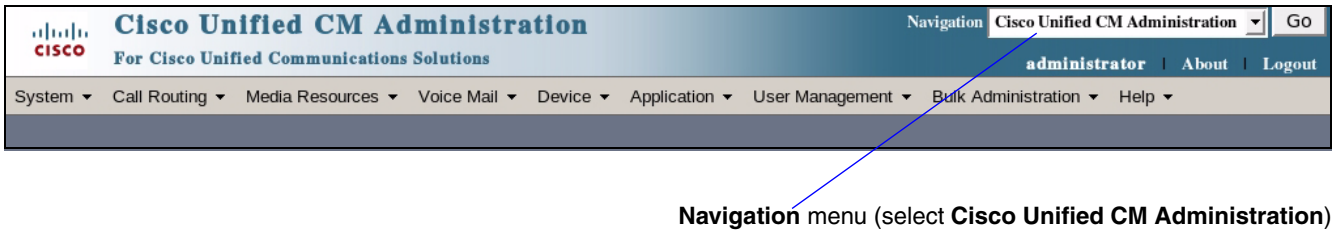
6. Scroll down and click on the **Save** button at the bottom of the page.

Figure 4-5. Save Button on the Cisco Unified Serviceability Page



7. Scroll up and click on the **Navigation** drop-down menu. Select **Cisco Unified CM Administration**.

Figure 4-6. Navigation Menu



8. Click on the **Go** button.

Note You only need to complete Step 1 through Step 8 once for all CyberData devices.

4.4 Obtain the MAC Address from the CyberData Device to be Added to the System

In order to complete some of the steps in this procedure, you will first need to get the ethernet address from the **CyberData Ceiling Speaker Home Page**.

To obtain the MAC address from the CyberData Device to be added to the system,

1. Log into the CyberData Configuration Home page (Figure 4-7) by pointing your browser to the speaker's IP address.

   Note For the initial configuration of the speaker, refer to the VoIP Ceiling Speaker Operation Guide which can be found at the following web address:

   http://www.cyberdata.net/support/voip/ceilingspeaker.html

   Note You may also download CyberData's VoIP Discovery Utility program which allows you to easily find and configure the default web address of the CyberData VoIP products. CyberData's VoIP Discovery Utility program is available at the following web address:

   http://www.cyberdata.net/support/voip/discovery_utility.html

2. When prompted, enter the following **Web Access Username** and **Web Access Password** to access the **CyberData Ceiling Speaker Home Page** (Figure 4-7):

   Default Login:

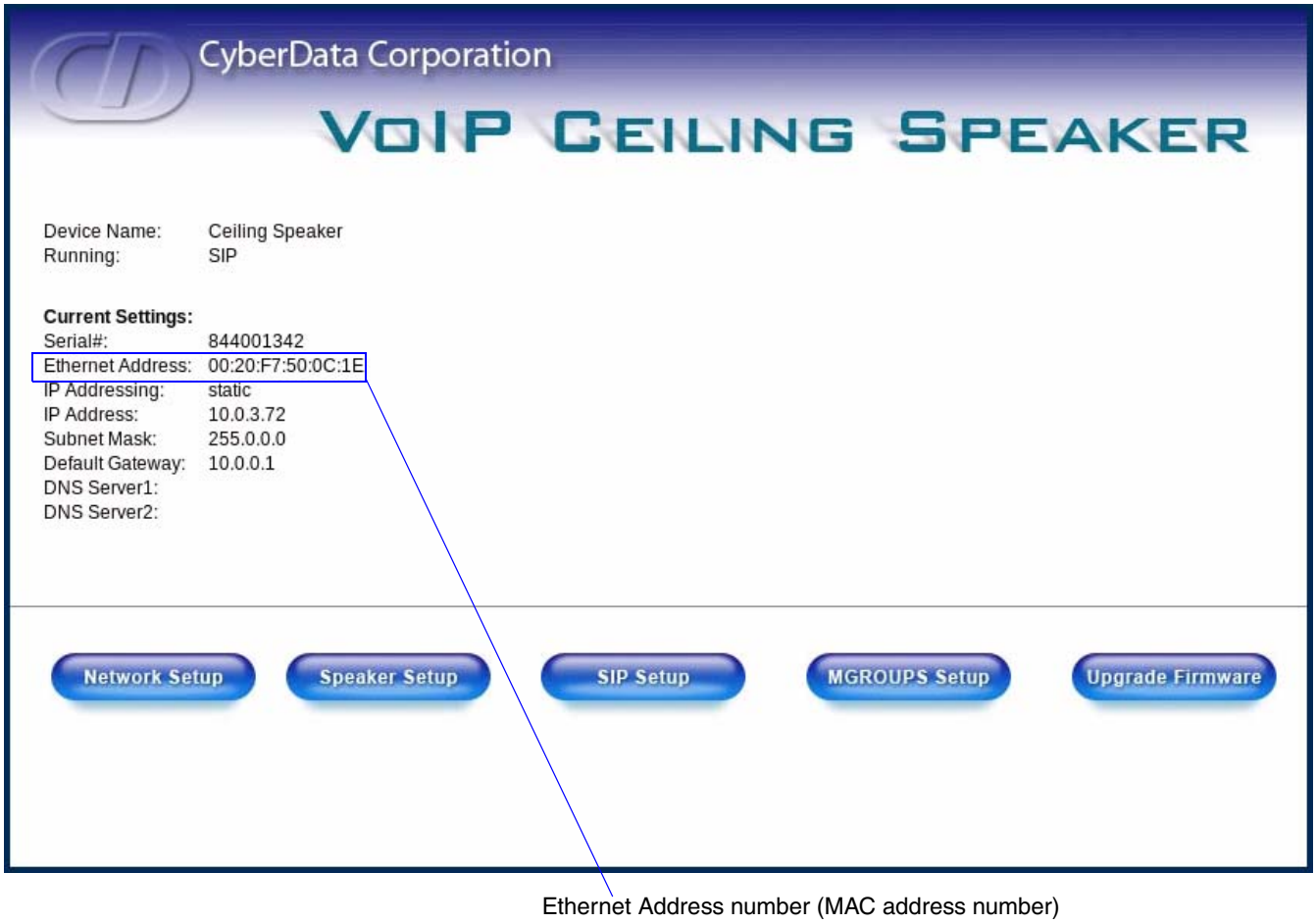
   Web Access Username: **admin**

   Web Access Password: **admin**

3. Go to the **CyberData Ceiling Speaker Home Page** (Figure 4-7)and write down the **Ethernet Address** number from it.

   Note You will need this **Ethernet Address** number to complete some steps later in this procedure that will ask for a **MAC Address** number.

Figure 4-7. CyberData Ceiling Speaker Home Page

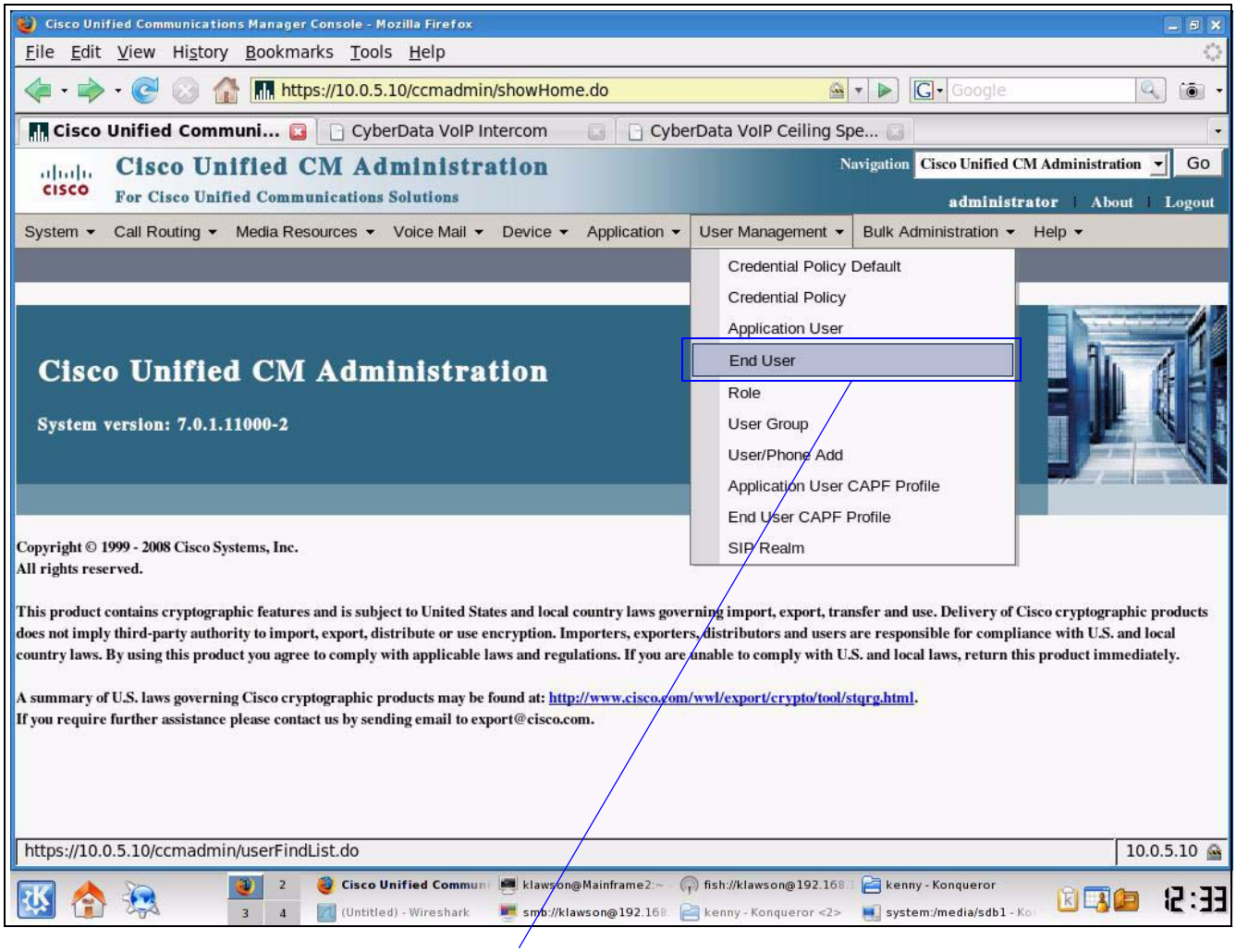


4.5 Setup a New User in Cisco Call Manager

To setup a new user in Cisco Call Manager,

1. Go to the **Cisco Unified CM Administration** page. On the **Cisco Unified CM Administration** page, go to the **User Management** menu and select **End User**. This will take you to the **Find and List Users** page.

Figure 4-8. User Management Menu


Cisco Unified Communications Manager Console - Mozilla Firefox
File Edit View History Bookmarks Tools Help
https://10.0.5.10/ccmadmin/showHome.do
Cisco Unified Communi...
CyberData VoIP Intercom
CyberData VoIP Ceiling Spe...
Cisco Unified CM Administration
For Cisco Unified Communications Solutions
Navigation
Cisco Unified CM Administration
Go
administrator
About
Logout
System
Call Routing
Media Resources
Voice Mail
Device
Application
User Management
Bulk Administration
Help
Credential Policy Default
Credential Policy
Application User
End User
Role
User Group
User/Phone Add
Application User CAPF Profile
End User CAPF Profile
SIP Realm
Cisco Unified CM Administration
System version: 7.0.1.11000-2
Copyright © 1999 - 2008 Cisco Systems, Inc.
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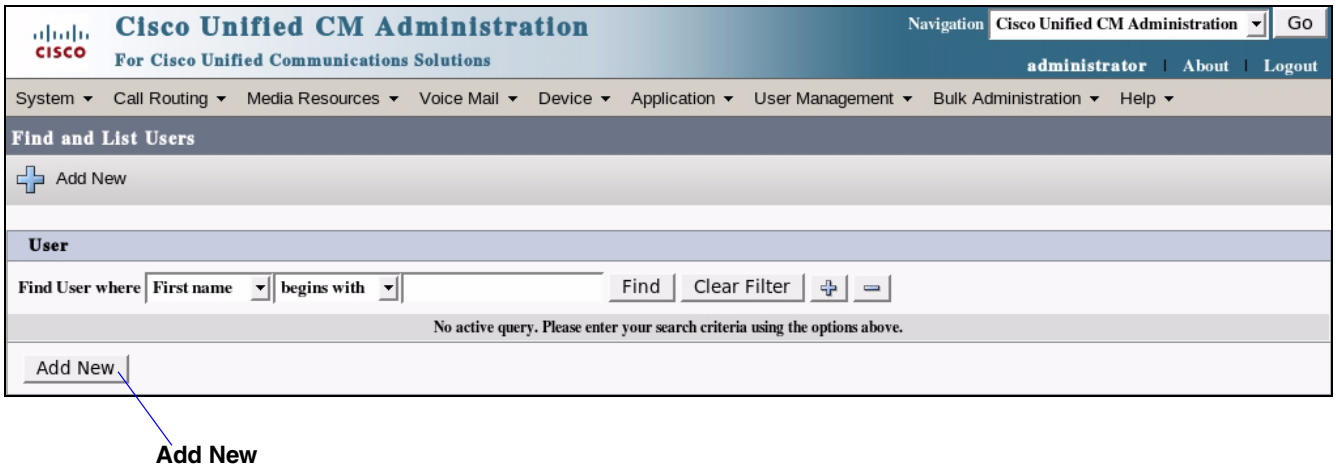
This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.
A summary of U.S. laws governing Cisco cryptographic products may be found at: http://www.cisco.com/wwl/export/crypto/tool/stqrg.html.
If you require further assistance please contact us by sending email to export@cisco.com.
https://10.0.5.10/ccmadmin/userFindList.do
10.0.5.10

User Management menu (select **End User**)

2. On the **Find and List Users** page, click on **Add New** (Figure 4-9). This will take you to the **End User Configuration** page.

Figure 4-9. Find and List Users Page



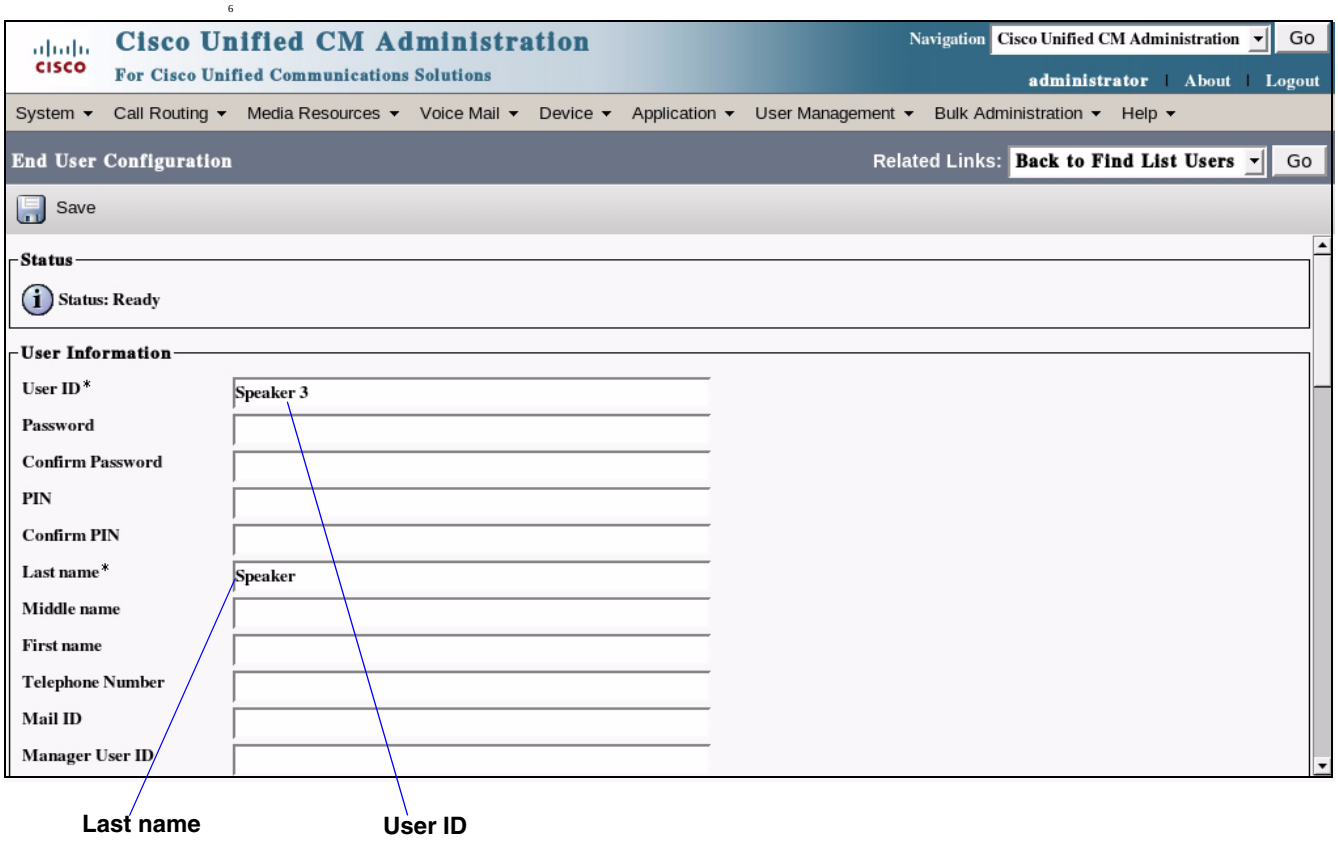
3. On the **End User Configuration** page (Figure 4-10), complete the following steps:
   - Type a user ID into the **User ID** field.

     Note Write this User ID down. You will need this User ID to complete some steps later in this procedure.

   - Type a name into the **Last name** field.

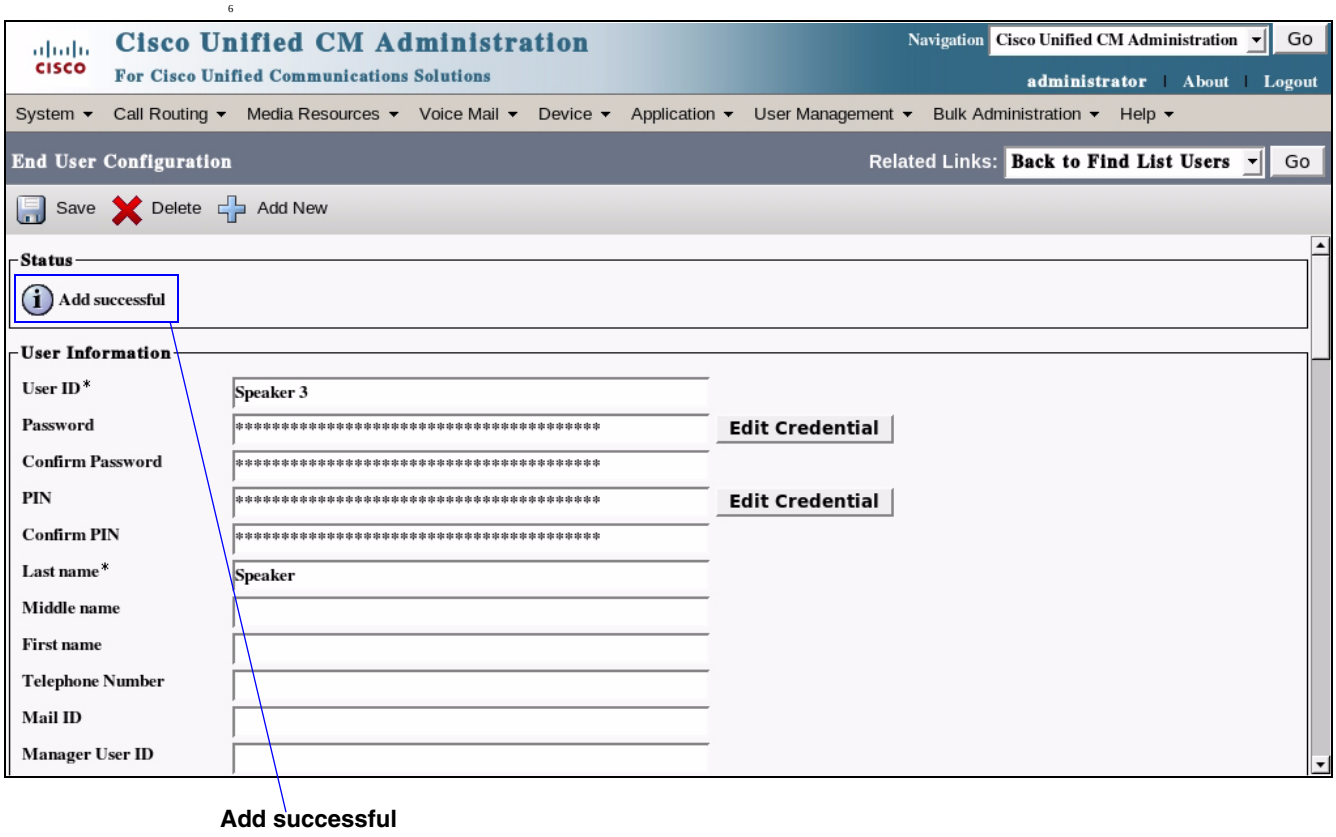
     Note The **User ID** field and the **Last name** field have an asterisk next to them because they are the only two fields that you need to complete on this page. On the Cisco Call Manager pages, only the fields with an asterisk will require input from you.

Figure 4-10. End User Configuration Page



4. Scroll down and click **Save** at the bottom of the page. After a few seconds you will see the screen shown in Figure 4-11. The screen Status will now say **Add Successful**.

Figure 4-11. End User Configuration Page

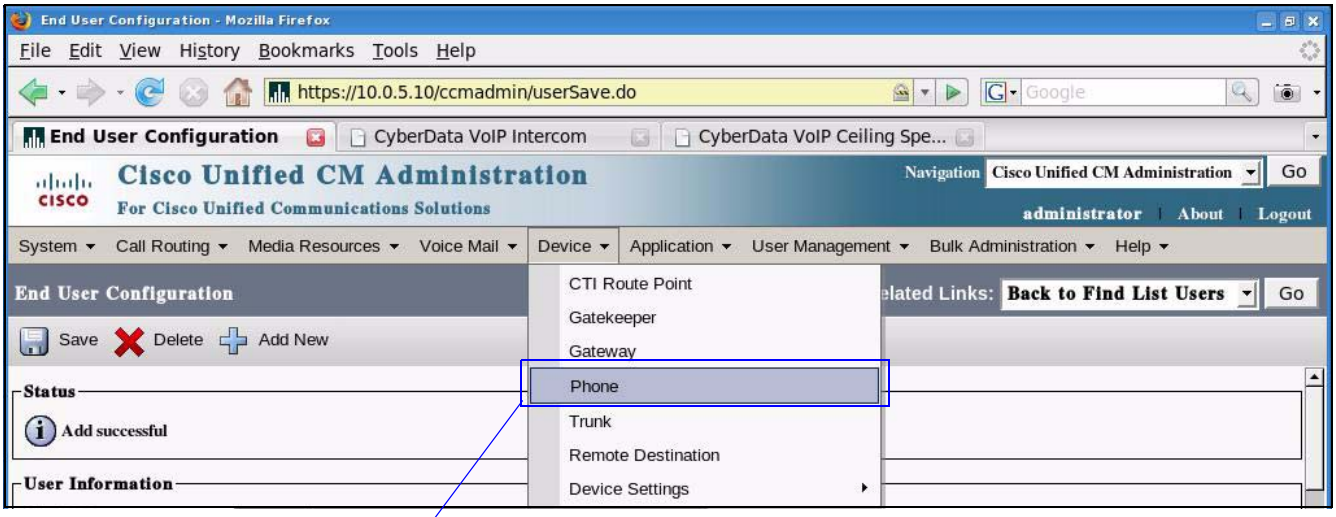


4.6 Set Up a New Phone Device in Cisco Call Manager

To set up a new phone device in Cisco Call Manager,

1. Go to the **Device** menu and select **Phone**. This will take you to the **Find and List Phones** menu.

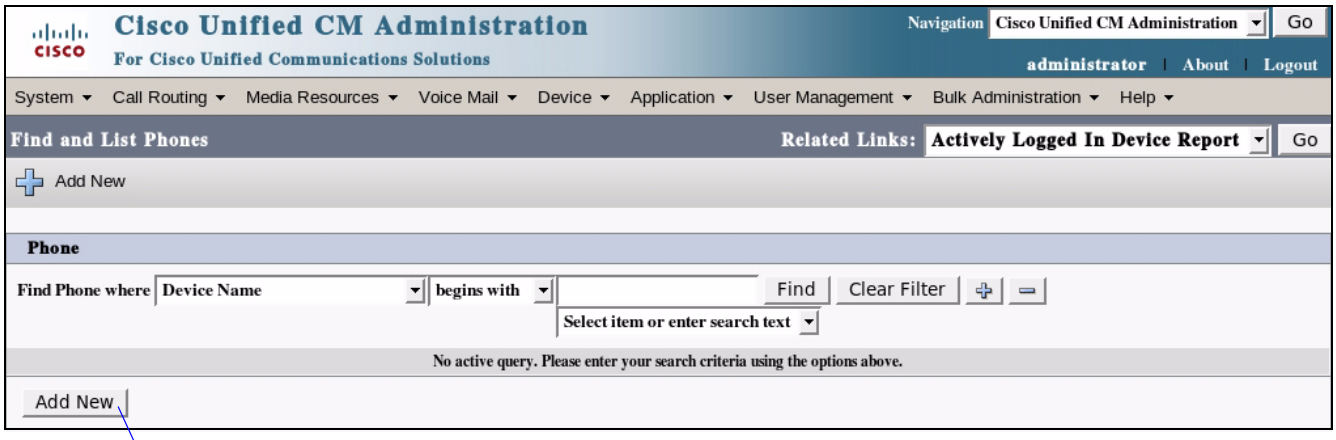
Figure 4-12. Cisco8



Device menu (select **Phone**)

2. In the **Find and List Phones** menu, click on **Add New**. This will take you to the **Add a New Phone** page.

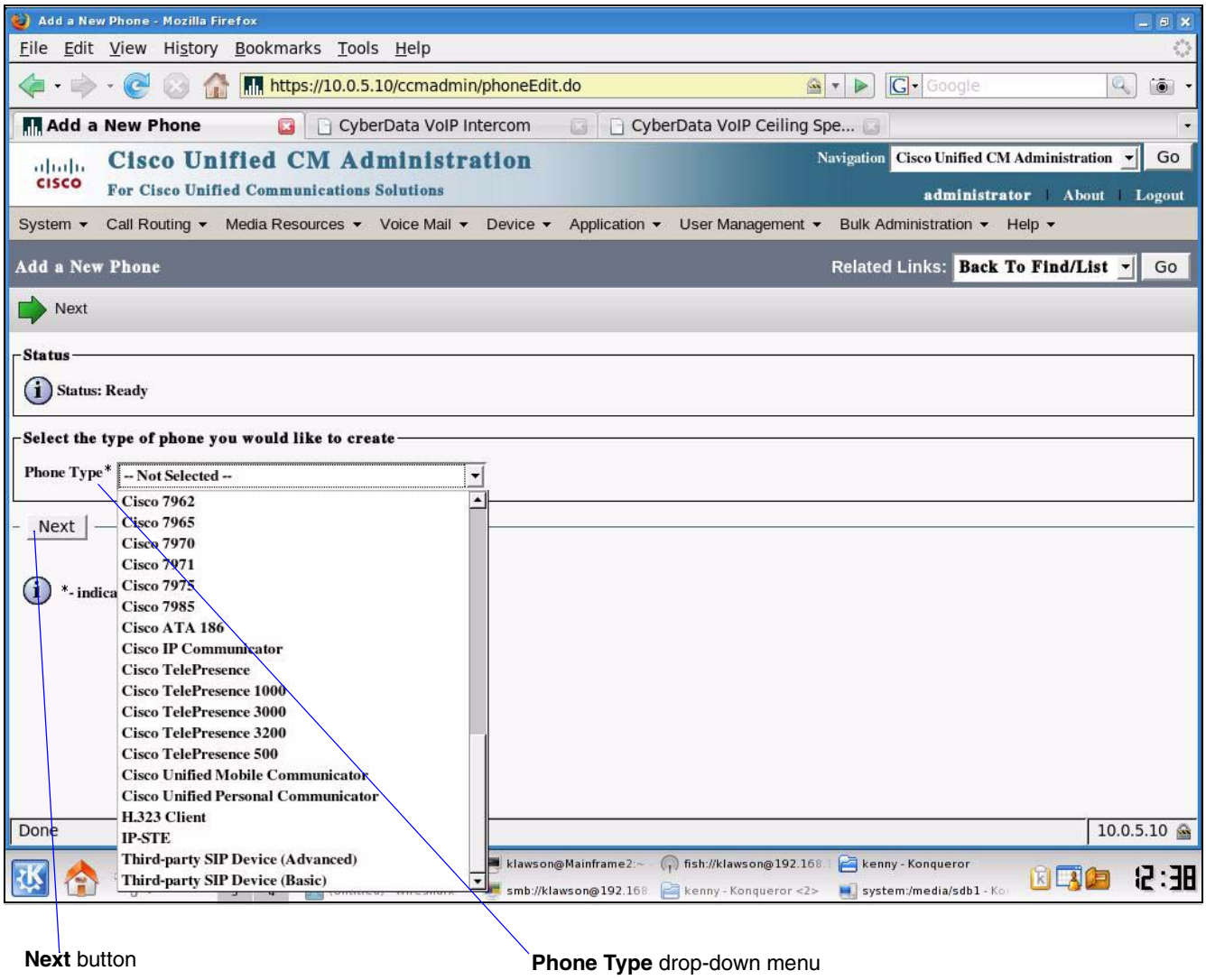
Figure 4-13. Find and List Phones Menu



Add New

3. On the **Add a New Phone** page go to the **Phone Type** drop-down menu, and select **Third Party SIP Device (Basic)**.

Figure 4-14. Phone Configuration Page



4. Click **Next**. This will take you to the **Phone Configuration** page.

For a summary of all of the settings that are necessary for the **Phone Configuration** page (Figure 4-15 through Figure 4-17), see Table 4-1.

For a step-by-step description of the settings that are necessary for the Phone Configuration page, go to Step 5.

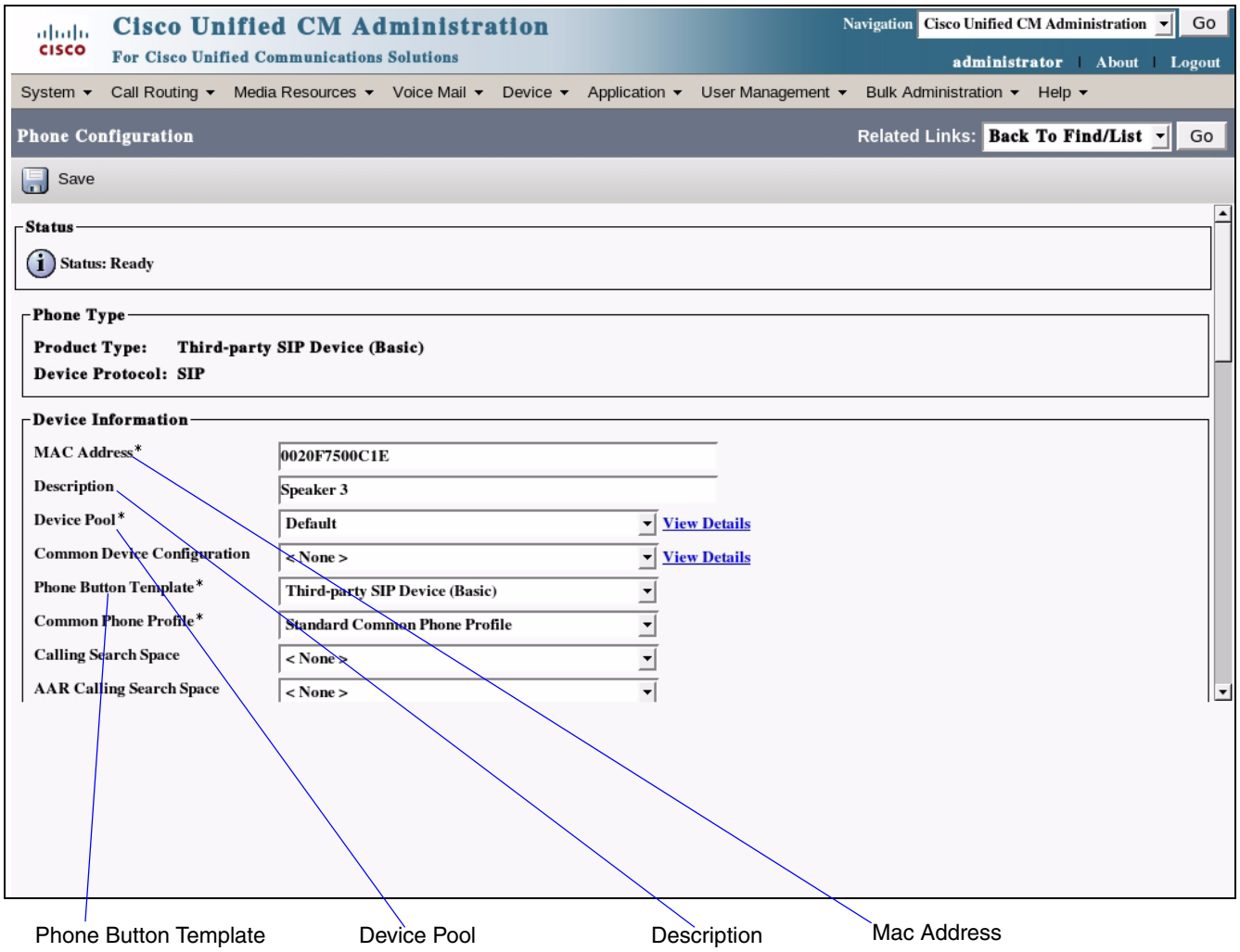
Note On the **Phone Configuration** page, you will see that all of the parameters listed in Table 4-1 have an asterisk next to them because they are the only parameters that require your input on the **Phone Configuration** page.

Table 4-1. Phone Configuration Page Settings

Phone Device Parameter	Selected Setting
Mac Address field	Type the number that you wrote down from the **Ethernet Address** field of the **CyberData Ceiling Speaker Home Page** (Figure 4-7).
Description field	Type any kind of description that you want. In Figure 4-15, the name *Speaker 3* was typed into the **Description** field.
Device Pool drop-down menu	Select **Default**.
Phone Button Template drop-down menu	Select **Third party SIP Device (Basic)**.
Owner User ID drop-down menu	Select the name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".
Device Security Profile drop-down menu	Select **Third-Party SIP Device Basic-Standard SIP Non-secure Profile**.
SIP Profile drop-down menu	Select **Standard SIP Profile**.
Digest User drop-down menu	Select the name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".
Media Termination Point Required box	Make sure that the **Media Termination Point Required** box is checked.
Save button on the bottom of the page	Click the Save button on the bottom of the page only after you have finished configuring all of the settings on the **Phone Configuration** page.

5. On the **Phone Configuration** page (Figure 4-15), get the number that you wrote down from the **Ethernet Address** field of the **CyberData Ceiling Speaker Home Page** (Figure 4-7), and type it into the **Mac Address** field.

Figure 4-15. Phone Configuration Page



6. In the **Description** field, type any kind of description that you want.

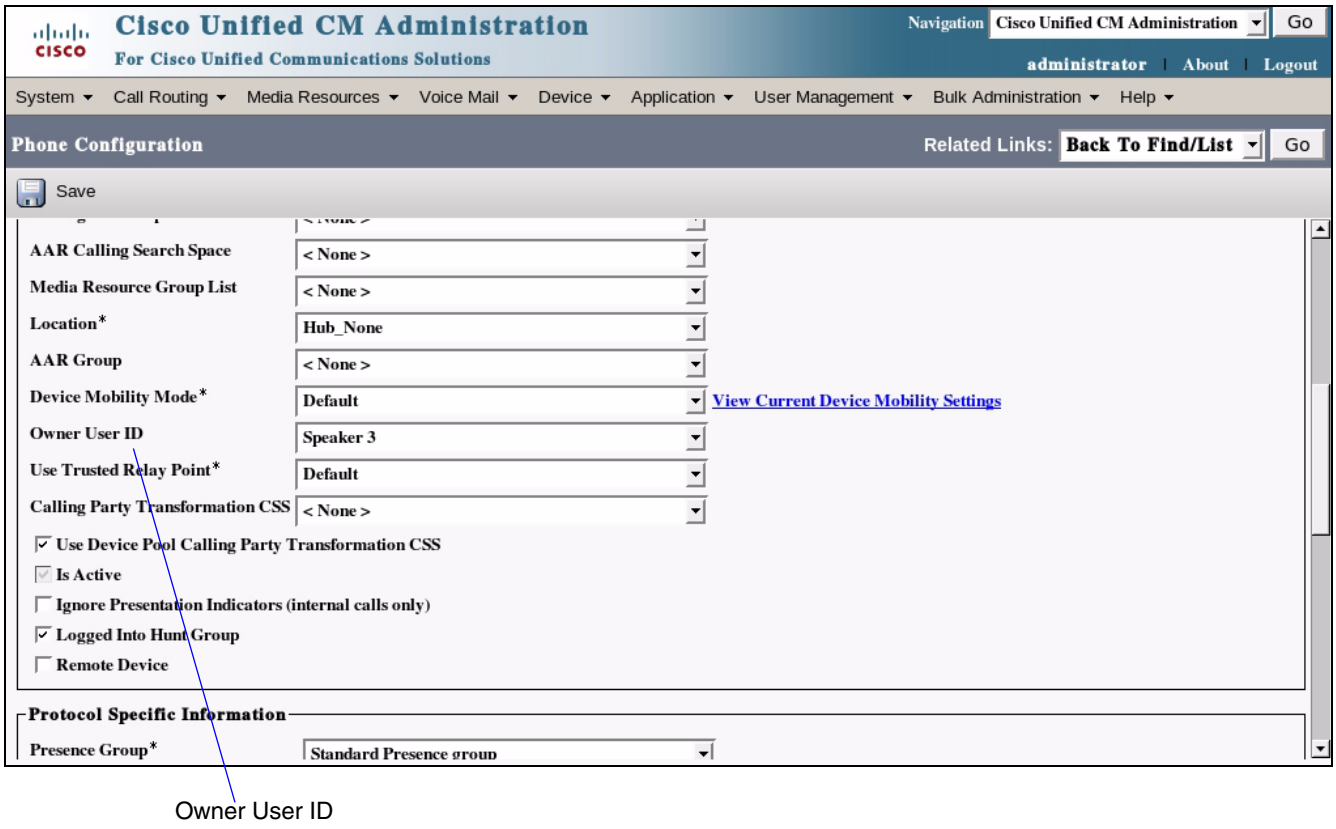
   Note In Figure 4-15, the name *Speaker 3* was typed into the **Description** field.

7. In the **Device Pool** drop-down menu, select **Default**.

8. In the **Phone Button Template** drop-down menu, select **Third party SIP Device (Basic)**.

9. Scroll down to the **Owner User ID** drop-down menu (Figure 4-16). Select the name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".

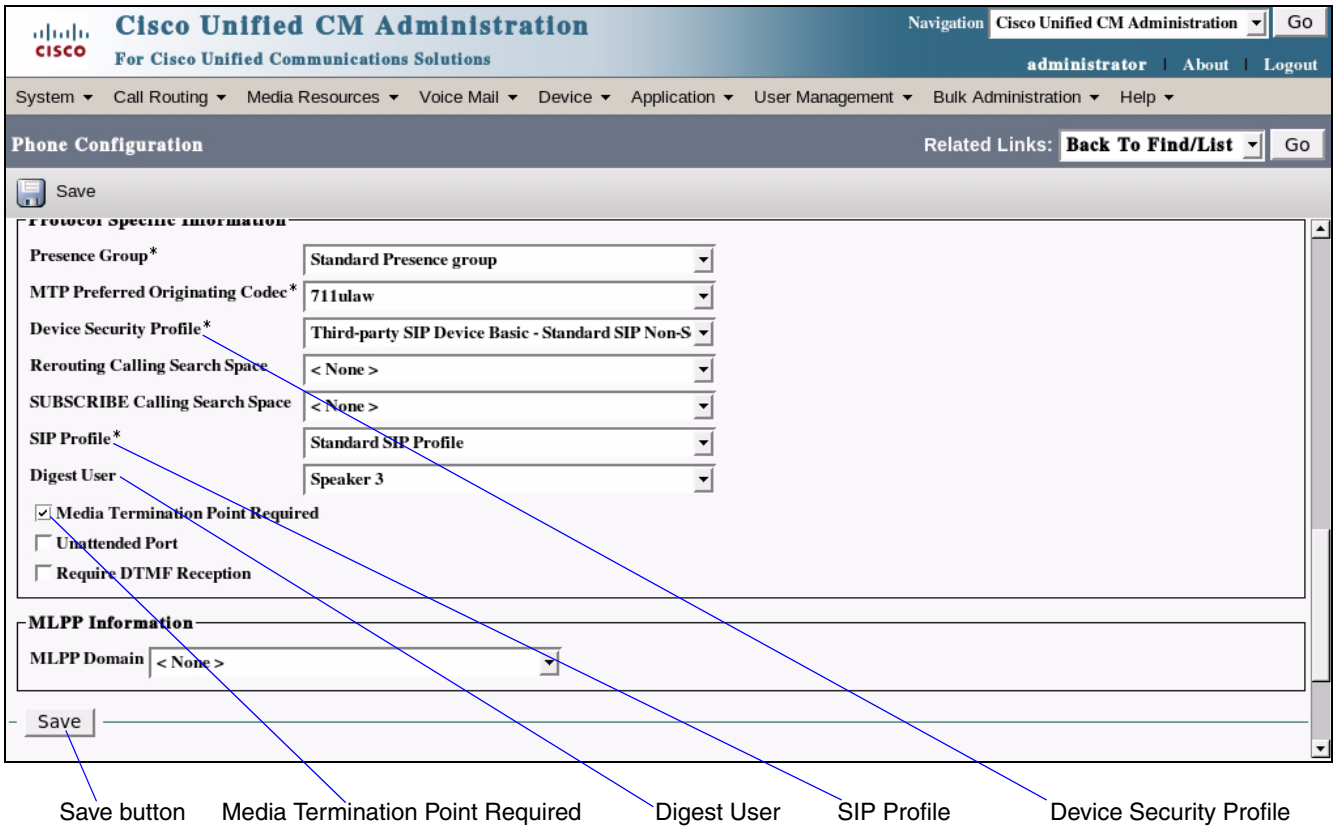
Figure 4-16. Phone Configuration Page



Owner User ID

10. Scroll down to the **Device Security Profile** drop-down menu (Figure 4-17), and select **Third-Party SIP Device Basic-Standard SIP Non-secure Profile**.

Figure 4-17. Phone Configuration Page



11. In the **SIP Profile** drop-down menu, select **Standard SIP Profile**.

12. In the **Digest User** drop-down menu, select the name that you typed into the **Description** field in Select the name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".

13. Click to check the box next to **Media Termination Point Required**.

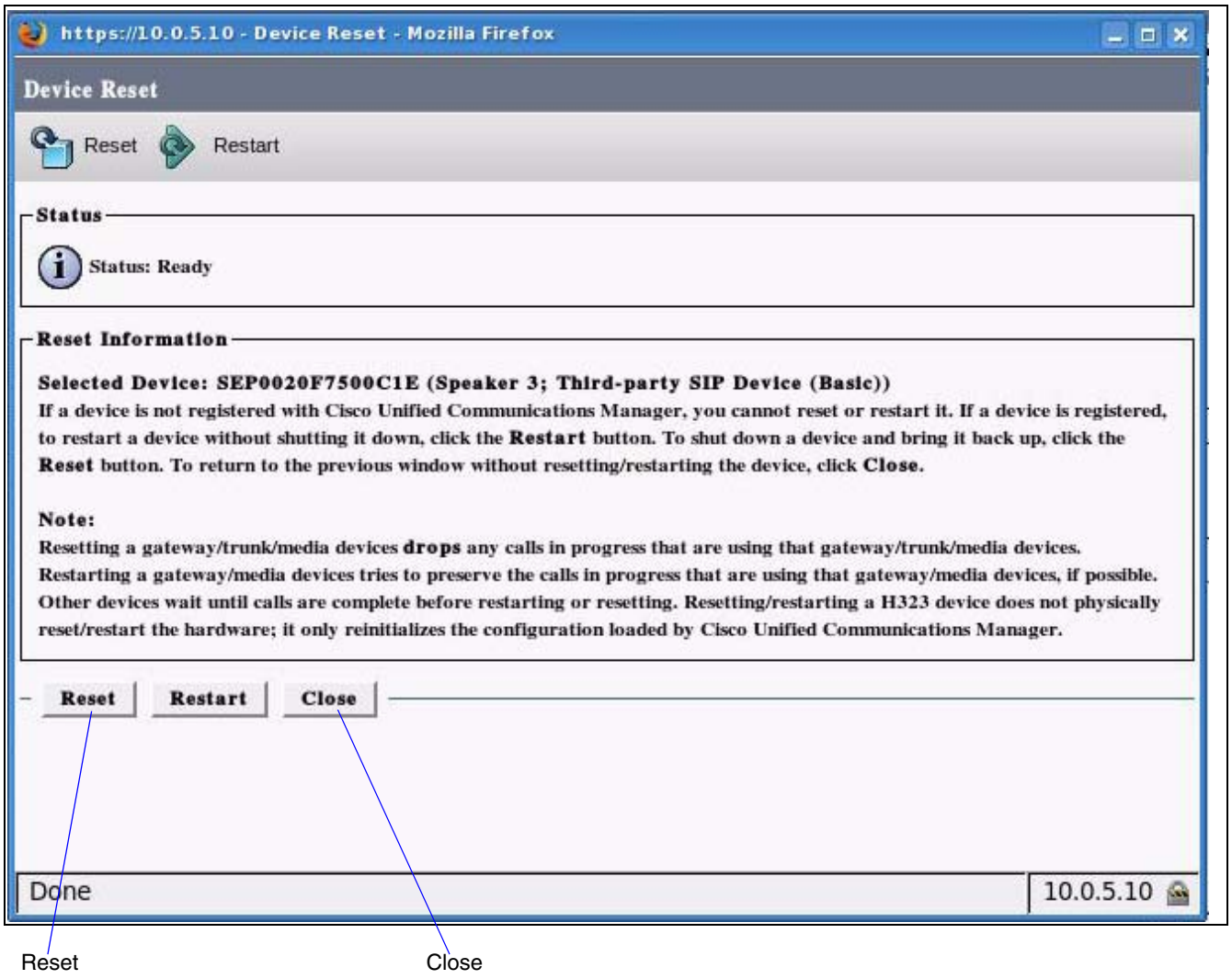
14. Click on the **Save** button at the bottom of the page. Wait for the page to refresh and you will see the following popup window that says *Click on the Reset Phone Button to have the changes take effect*. Click on the **OK** button.

Figure 4-18. Click on the Reset Phone Button Dialog Window

15. After the page takes a minute to process, you will see the **Phone Configuration** page again. Scroll down to the bottom of the page and press the **Reset** button.

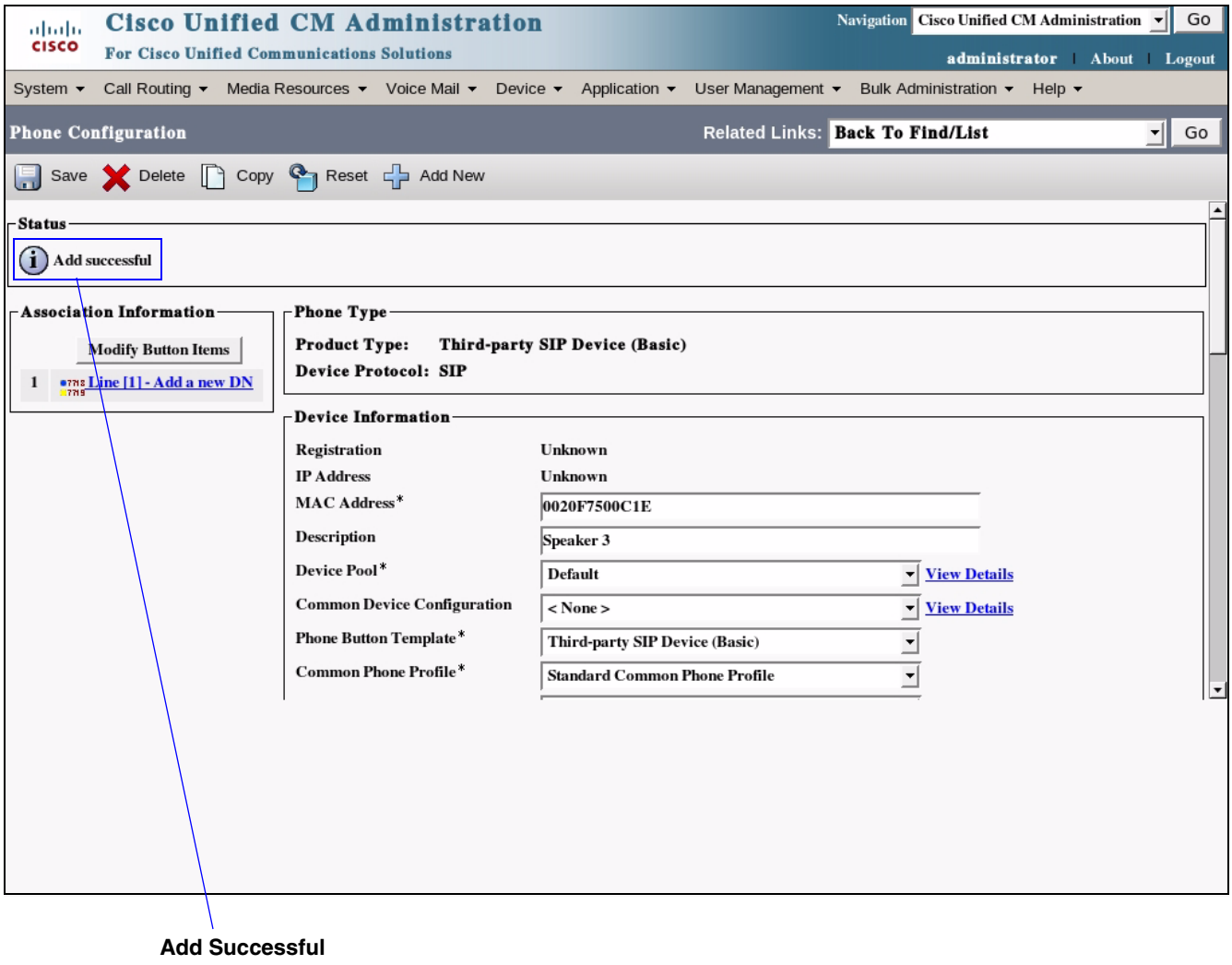
16. A new **Device Reset** window appears (Figure 4-19). Click on the **Reset** button in the window, and then click on the **Close** button.

Figure 4-19. Device Reset Window


https://10.0.5.10 - Device Reset - Mozilla Firefox
Device Reset
Reset
Restart
Status
Status: Ready
Reset Information
Selected Device: SEP0020F7500C1E (Speaker 3; Third-party SIP Device (Basic))
If a device is not registered with Cisco Unified Communications Manager, you cannot reset or restart it. If a device is registered, to restart a device without shutting it down, click the Restart button. To shut down a device and bring it back up, click the Reset button. To return to the previous window without resetting/restarting the device, click Close.
Note:
Resetting a gateway/trunk/media devices drops any calls in progress that are using that gateway/trunk/media devices. Restarting a gateway/media devices tries to preserve the calls in progress that are using that gateway/media devices, if possible. Other devices wait until calls are complete before restarting or resetting. Resetting/restarting a H323 device does not physically reset/restart the hardware; it only reinitializes the configuration loaded by Cisco Unified Communications Manager.
Reset
Restart
Close
Done
10.0.5.10
Reset
Close

17. After the reset is complete, you will see the page shown in Figure 4-20. The **Status** section on the page will say **Add Successful**.

Figure 4-20. Association Information Section

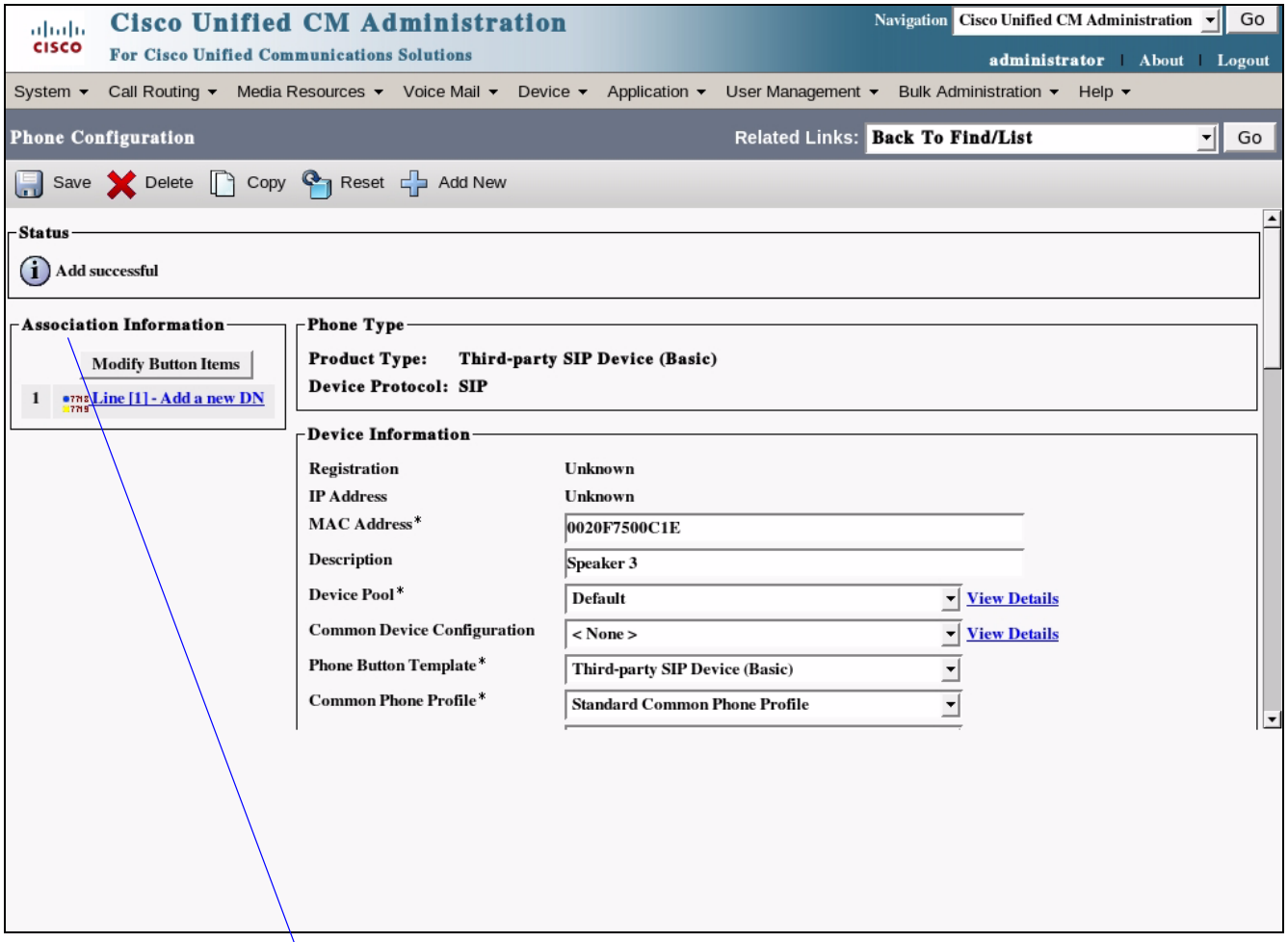


4.7 Create a New Directory Number (DN) and Associate it with the New Phone Device

To create a new directory number (DN) and associate it with the new phone device,

1. Underneath the **Modify Button Items** button, click on **Line(1) - Add a new DN**.

Figure 4-21. Add a New Directory Number (DN)



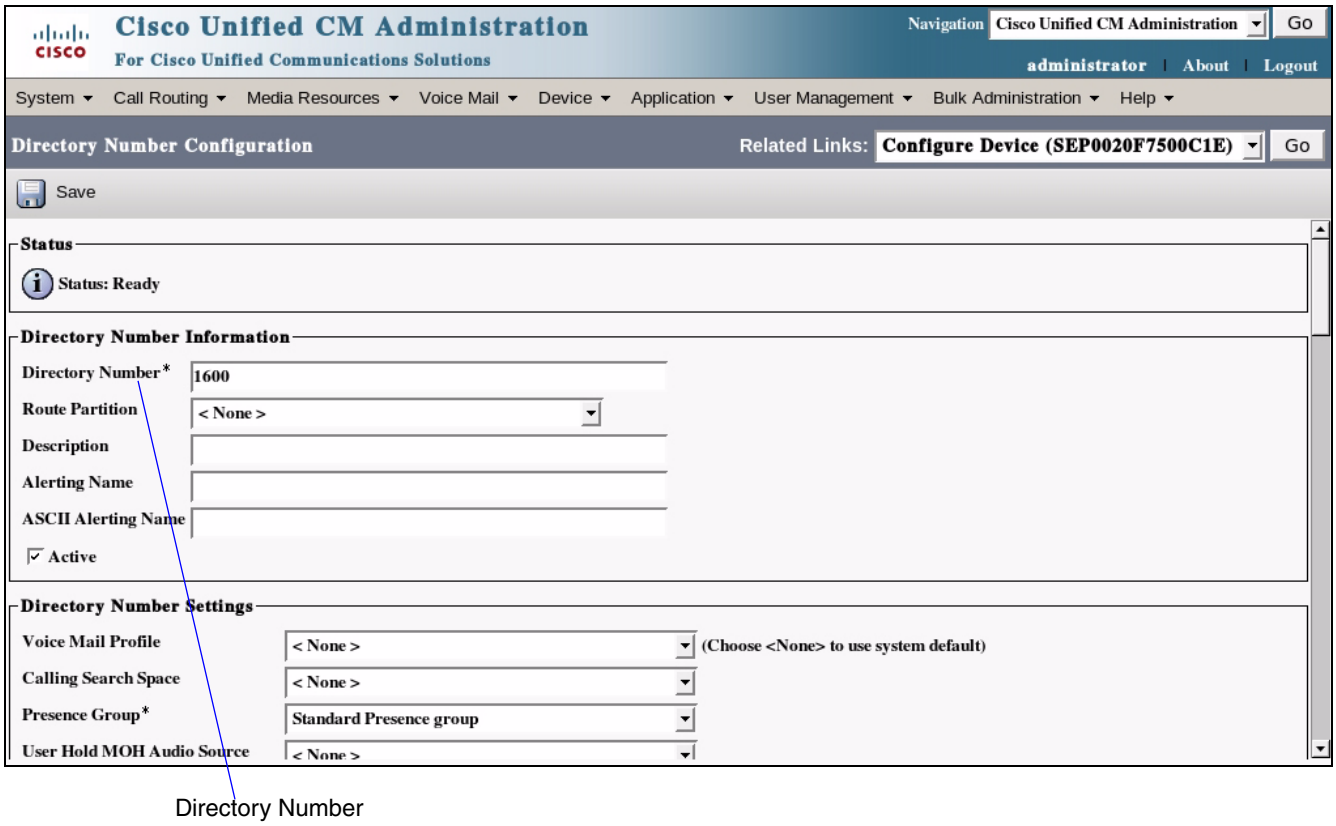
Association Information section

2. In the **Directory Number** field, type an extension number that is within the range of extensions that you have set up.

   Note Write this directory number down. You will need this directory number in order to complete some steps later in this procedure.

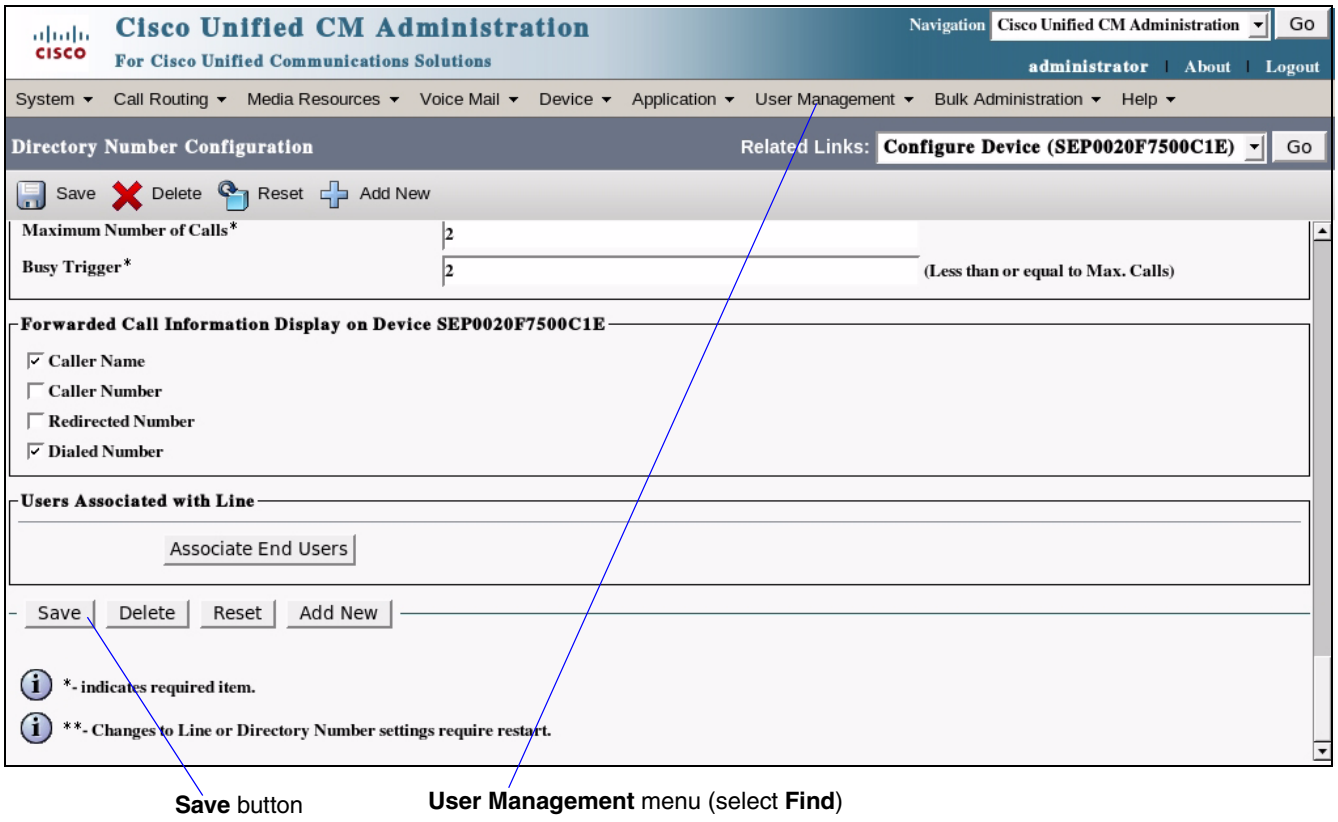
   Note In Figure 4-22, the number *1600* was typed into the **Directory Number** field.

Figure 4-22. Directory Number Configuration Page



3. Scroll down and click on the **Save** button on the bottom of the page.

Figure 4-23. Directory Number Configuration Page

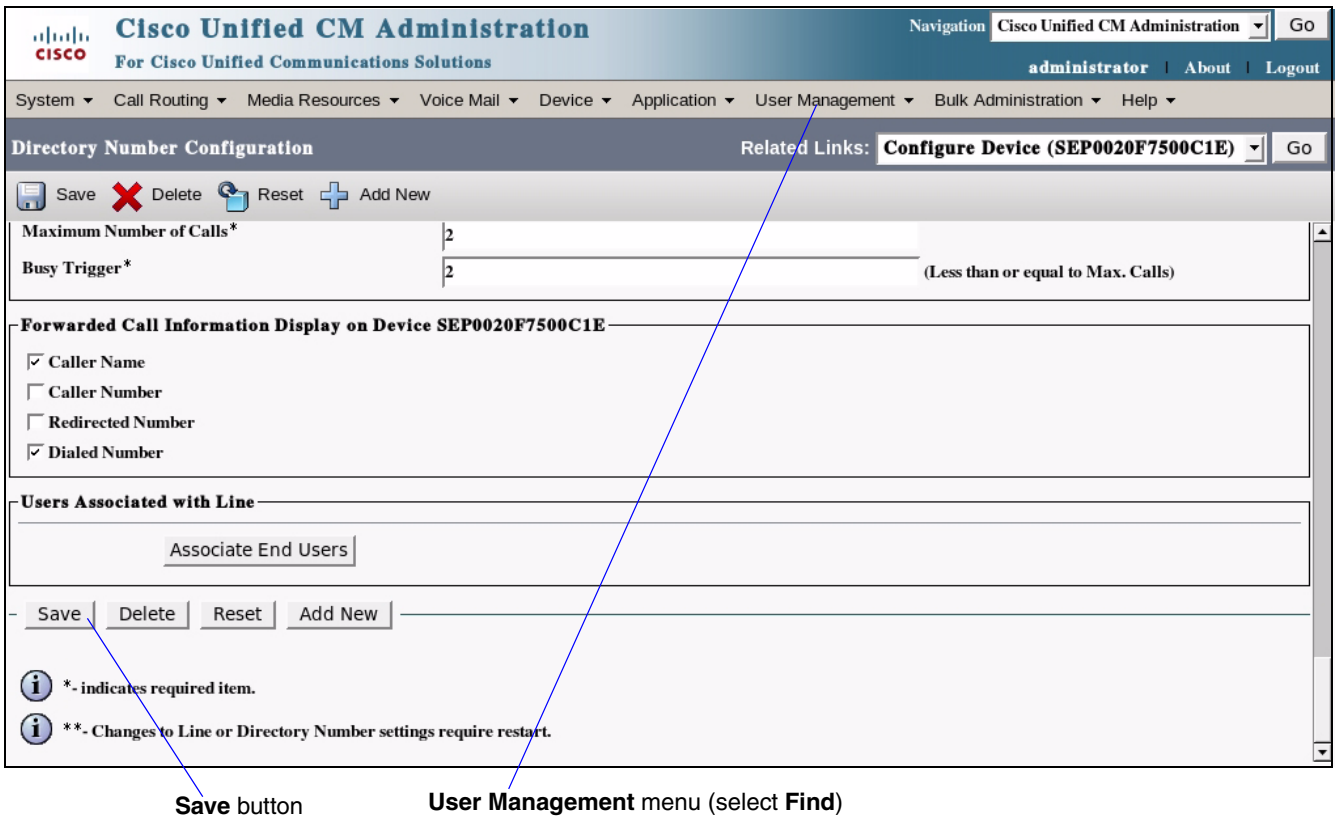


4.8 Associate the Phone Device and Directory Number with the New User

To associate the phone device and directory number with the new user,

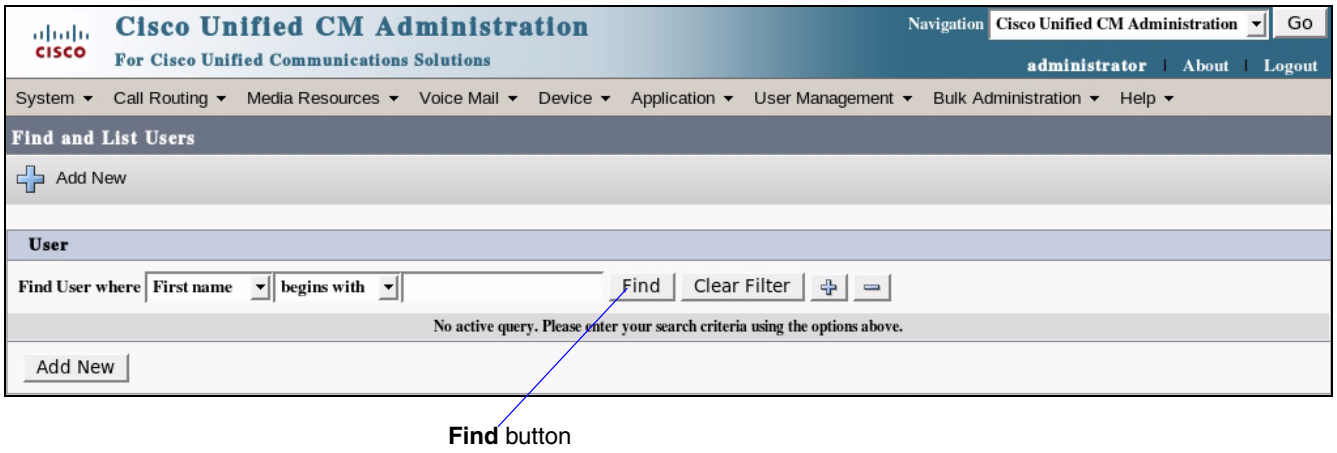
1. On the **Directory Number Configuration** page, go to the **User Management** menu and select **End User**.
2. Click on **Find**.

Figure 4-24. Directory Number Configuration Page



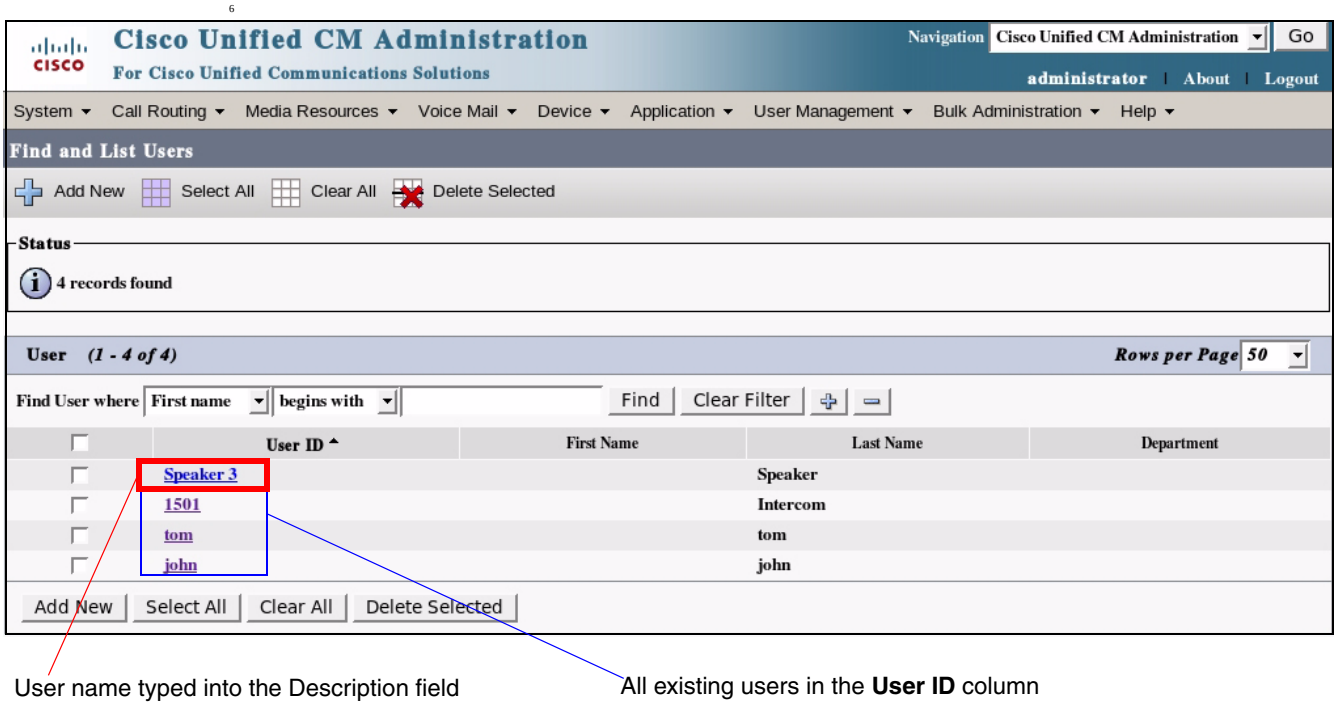
3. On the **Find and List Users** page, click on the **Find** button.

Figure 4-25. Find and List Users Page



4. All of the existing users will be listed in the **User ID** column.

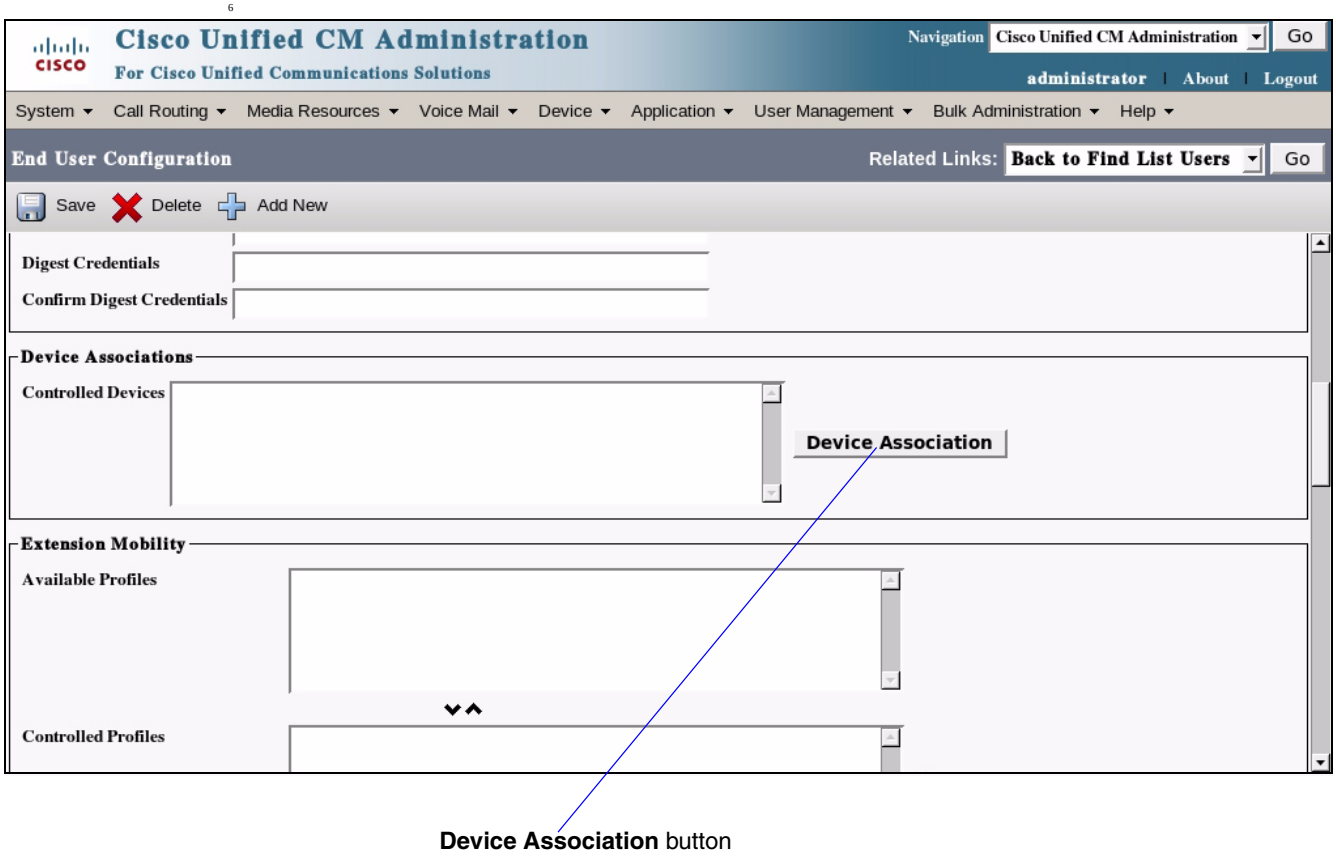
Figure 4-26. Cisco19



5. Click on the User ID that has the name of the user that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager". This action will take you to the **End User Configuration** page.

6. On the **End User Configuration** page that appears, click on the **Device Association** button. This will take you to the **User Device Association** page.

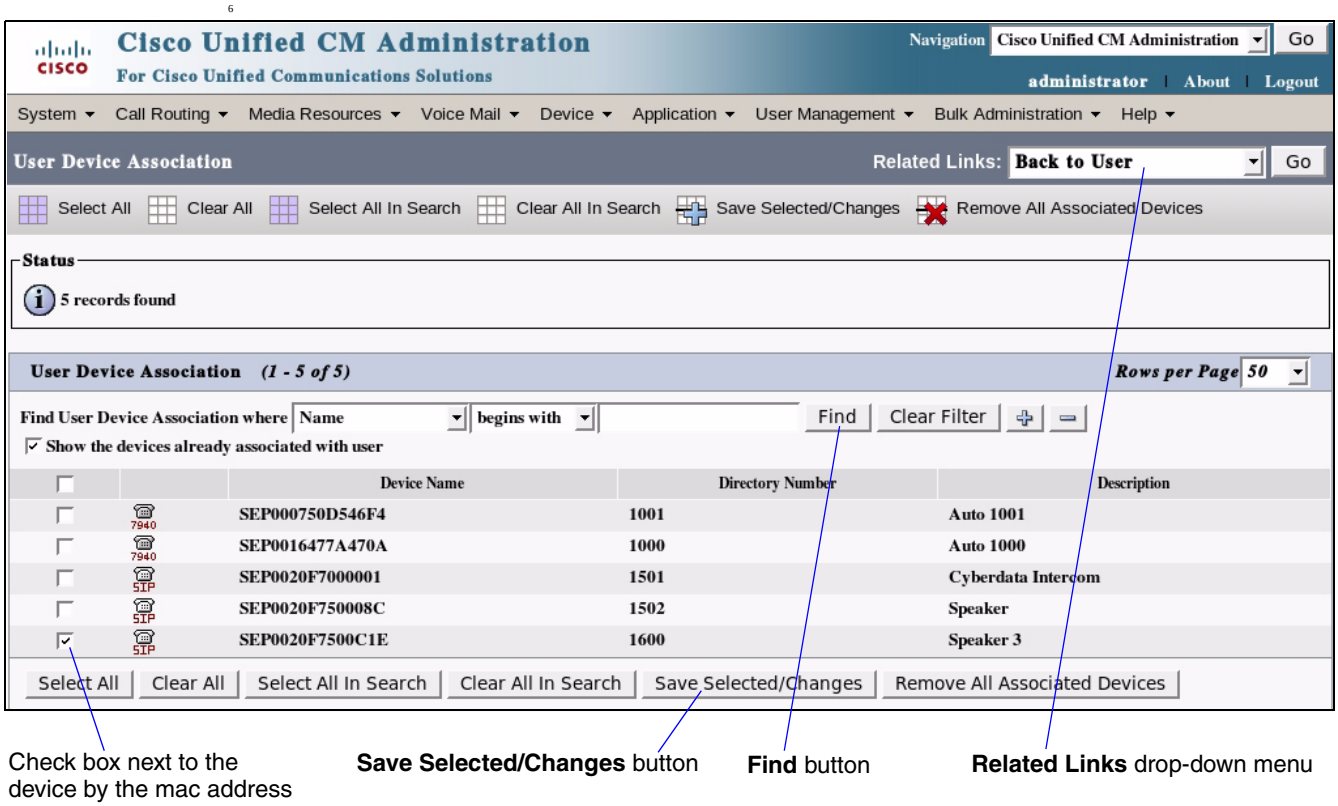
Figure 4-27. End User Configuration



Device Association button

7. On the **User Device Association** page, click on the **Find** button.
8. Find the device by the mac address, and click on the check box next to it.
9. Click on **Save Selected/Changes** button.

Figure 4-28. User Device Association Page



Check box next to the device by the mac address

Save Selected/Changes button

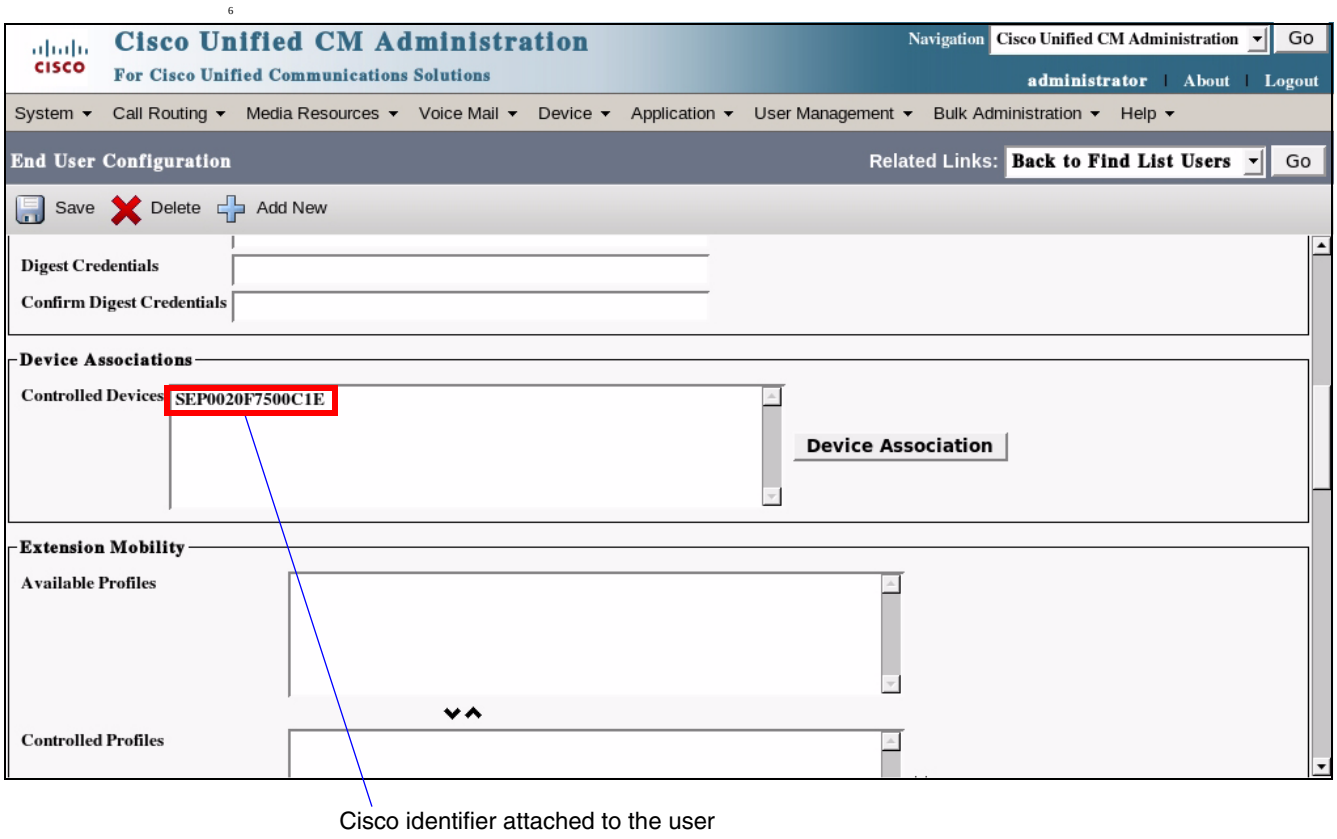
Find button

Related Links drop-down menu

10. Go to the **Related Links** drop-down menu. Select **Back to User** and click on the **Go** button. This will take you back to the **End User Configuration** page.

11. On the **End User Configuration** page, look at the **Device Associations** section and the **Controlled Devices** window to verify that the Cisco identifier for the speaker is now attached to the user.

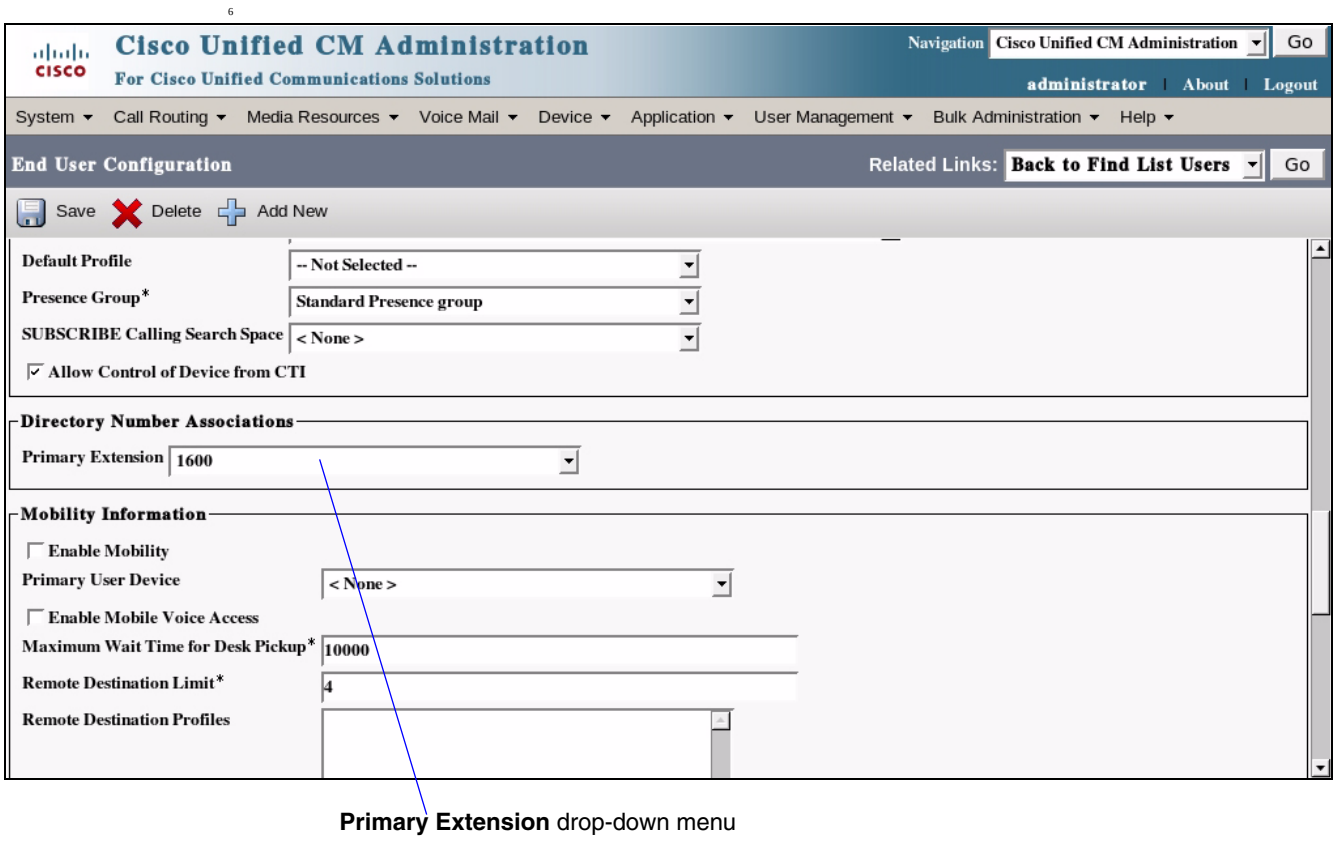
Figure 4-29. End User Configuration Page



12. Scroll down the **End User Configuration** page. In the **Directory Number Associations** section, click on the **Primary Extension** drop-down menu and select the extension number you chose in Step 2.

    Note In Figure 4-30, the number *1600* was selected for the primary extension.

Figure 4-30. End User Configuration Page



13. Scroll down to the bottom of the page and click on **Save** button.

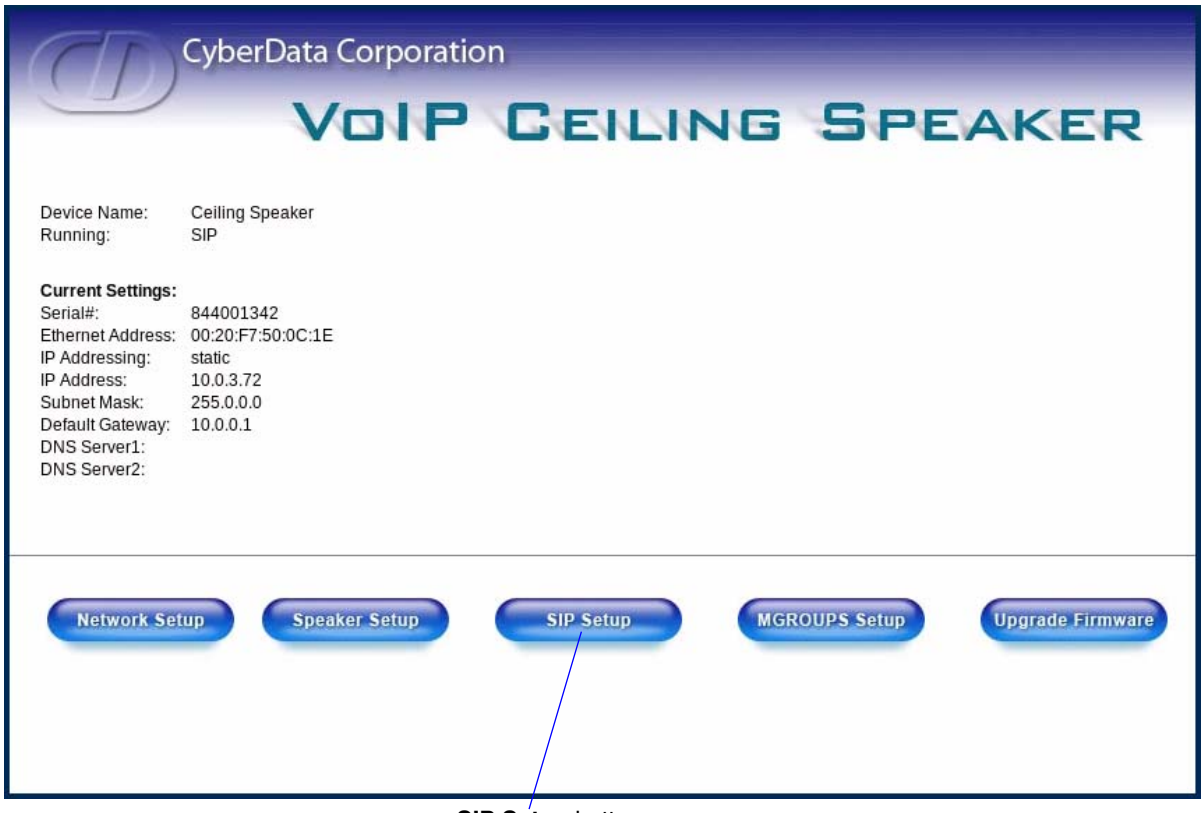
4.9 Setup CyberData Device Parameters

To setup CyberData device parameters,

1. To register the speaker, you will need to enter the information from Cisco Call Manager section into the speaker by logging into the CyberData Configuration Home page.

   Log into the CyberData Configuration Home page (Figure 4-31) by pointing your browser to the speaker's IP address.

Figure 4-31. CyberData Ceiling Speaker Home Page



SIP Setup button

   For the initial configuration of the speaker, refer to the VoIP Ceiling Speaker Operation Guide which can be found at the following web address:

   http://www.cyberdata.net/support/voip/ceilingspeaker.html

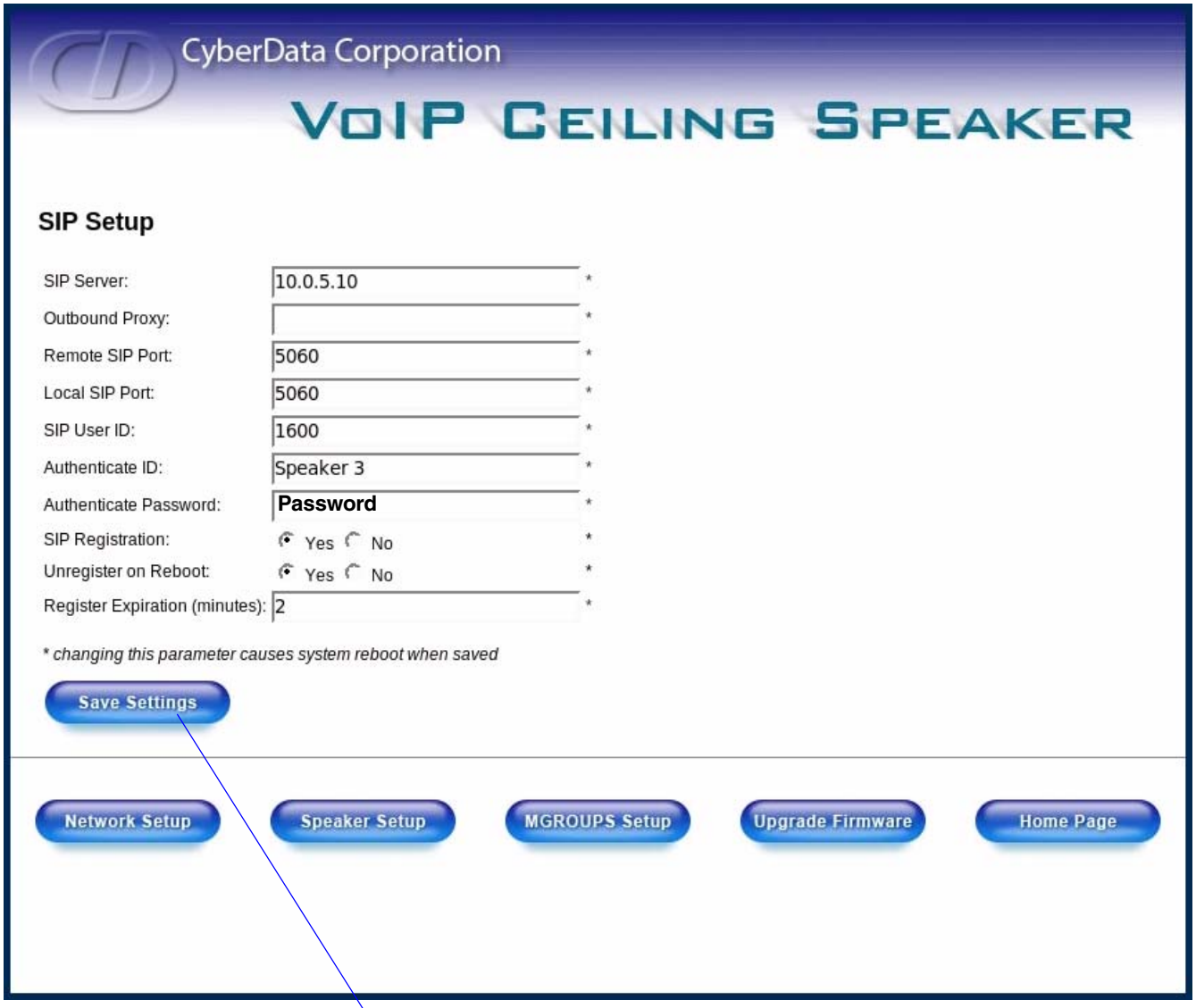
   Note You may also download CyberData's VoIP Discovery Utility program which allows you to easily find and configure the default web address of the CyberData VoIP products. CyberData's VoIP Discovery Utility program is available at the following web address:

   http://www.cyberdata.net/support/voip/discovery_utility.html

2. Type the username and password to log into the **CyberData Ceiling Speaker Home Page**.

3. On the **CyberData Ceiling Speaker Home Page** (Figure 4-31), click on the **SIP Setup** button. This will take you to the **SIP Setup** page (Figure 4-32).

Figure 4-32. SIP Setup Page



4. For a quick summary of all of the necessary settings on the **SIP Setup** page (Figure 4-32), see Table 5-1. For a step-by-step description of the necessary settings, go to Step 5. If a setting parameter is not listed in Table 5-1, then your input for that setting parameter is not required to complete this procedure.

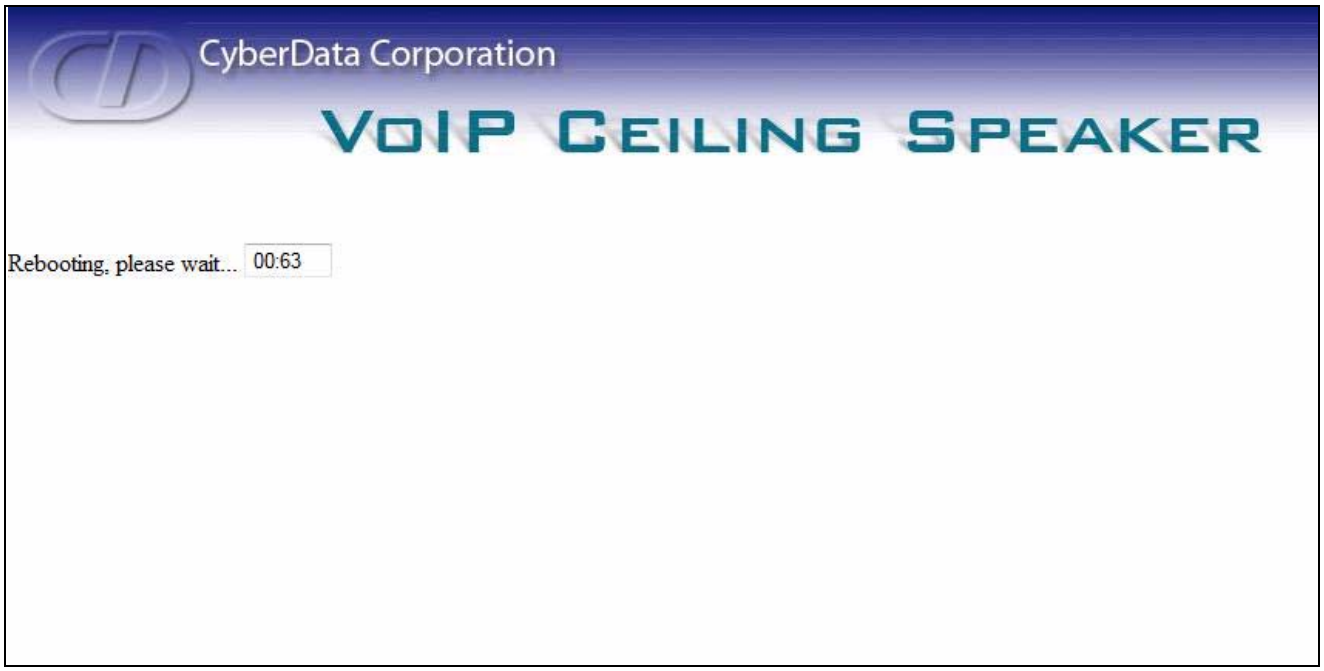
Table 5-1. SIP Setup Page Settings

SIP Setup Page Items	Setting
SIP Server field	Type the address of the Call Manager box.
SIP User ID field	Type the directory number that you wrote down in Step 2 of Section 4.7, "Create a New Directory Number (DN) and Associate it with the New Phone Device".
Authentication ID field	Type the Cisco User ID name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".
Authentication Password field	Type in a password. **NOTE**: Be sure to type a password at the login prompt or else the speaker will not be registered after the reboot in this procedure.
SIP Registration field	Select **Yes**.
Unregister on Reboot field	Select **Yes**.
Register expiration (minutes) field	Type **2**.
Save Settings button	Click on the **Save Settings** button only after you have finished configuring all of the settings on the **SIP Setup** page.

5. On the **SIP Setup** page (Figure 4-32), complete the following steps:
   - In the **SIP Server** field, type the address of the Call Manager box.
   - In the **SIP User ID** field, type the directory number that you wrote down in Step 2 of Section 4.7, "Create a New Directory Number (DN) and Associate it with the New Phone Device".
   - In the **Authentication ID** field, type the Cisco User ID name that you typed into the **Description** field in Step 3 of Section 4.5, "Setup a New User in Cisco Call Manager".
   - In the **Password** field, type in a password.
   - For **SIP Registration**, select **Yes**.
   - For the Unregister on Reboot field, select **Yes**.
   - In the **Register expiration (minutes)** field, type **2**.
6. Click on the **Save Settings** button.

7. After clicking on the **Save Settings** button, a reboot timer countdown will begin.

Figure 4-33. Speaker Reboot Timer



8. After the speaker reboots, the green **Status** LED on the speaker will blink at one second intervals to indicate normal operation.

   Note If **Yes** is selected for **Speaker Beep After Initialization** on the **Speaker Setup** page, you will hear a tone after the initialization sequence is complete.

9. To test the speaker, pick up any phone that is configured to the Cisco Call Manager system and call the speaker's extension number.

10. When a connection is established (as indicated by a beep), speak into the phone and verify that you can hear your voice through the speaker.

This step completes the procedure.